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THE EDITOR'S PAGE

Toward a Science of Emerging Order

It is currently fashionable for researchers to be open and sensitive to emerging themes both during and after data collection, particularly in studies in which the researcher becomes immersed in the setting. Although some major insights have emerged from such studies, the hope that new themes will emerge is often very little more than just that: a hope. Perhaps we need to develop a "science of emerging themes" as an aspect of methodology in the human sciences. Such a science could help us not only have more confidence that themes will emerge, but to have more confidence in the themes themselves. More importantly, such a science may also help us in articulating the slippery distinction between themes that "emerge" and themes that are "imposed" by the researcher.

What might such a science look like? Clearly there is no single perspective, from which to construct such a science. However, from my perspective emerging themes in human research is not an isolated phenomenon unique to human science, but rather is a phenomenon pervasive across all science. Seen in this way, the search for a science of emerging themes can draw on the wider experience of scientists everywhere, some of whom may prefer to call themselves philosophers, artists, historians, or mathematicians. The label is not the significant indicator. The significant indicator is that they are all interested in the wider phenomenon of *emerging order*.

How then might we approach a science of emerging order? In attempting to answer this question I can do little more than ask other questions. How do we know when order has emerged? How do things become ordered? Where does order come from? Is there a beginning to order? Does order come from order, from chaos, or from nothing? Does order begin with time, or does time begin with order? Can there be order without repetition? Poets, physicists, anthropologists, theologians, and others have all asked similar questions. I am in particular reminded of the work on the Laws of Form done in logic; of the relations between order and chaos done in mathematics; of the Superstring Theory of everything, including a theory of time before the Big Bang; of the Theory of Dissipative Structures describing how order emerges from chaos; of spontaneous social order emerging in autopoietic systems. Unfortunately, I am unable to cite any major work in education: *Rare is the educator who asks these questions*. It is as if education is taken to be an "applied" science or art; a domain of activity that takes from base disciplines but has no original base of its own. Not to ask about the origins of order is to assume that education is indeed a derivative phenomenon. To ask about order is to assert that education is a phenomenon of its own with its own need to pursue the basic question: How does order emerge in the domain of education?

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Moral Judgments and Reported Moral Actions: A Tenuous Relationship

Relationships among different measures of moral judgment, and between moral judgment and reports of moral behavior, were investigated in a normal population by means of two related studies. In Study I, the results of an objective moral reasoning test (MAT) were related to teachers' and parents' reports of the moral behavior of 9-year-old twin boys. In Study II relationships among scores on MAT, Kohlberg's Moral Dilemmas (MDI), one of Damon's tests, and reported delinquency-proneness were examined in 10-year-old boys. Once verbal ability was partialled out, MAT no longer predicted moral behavior in Study I, and neither MAT nor the free-response tests predicted delinquency-proneness in Study II. Moral reasoning tests were, however, fairly consistently related to verbal ability.

The main theme of this article is the relationship between the behavioral, emotional, and judgmental aspects of morality. It thus offers an assessment of the validity of cognitive developmental theory as it applies to the moral behavior domain. A second theme is an examination of the relations among different methods of assessing moral judgment.

Kohlberg's well-known Moral Dilemma Interview (MDI) deals with the aspect of moral judgment or reasoning by means of an open-ended, free-response method which classifies subjects' reasoning about the moral dilemmas posed to them into six stages of moral development. Various criticisms have been leveled at the test, for example, lack of evidence for the sequentiality of the stages (Kurtines & Greif, 1974), low test-

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retest reliability (Rubin & Trotter, 1977), or vagueness of the scoring rules (Kurtines & Greif, 1974). The latter criticism has been muted by the recent development of more tightly formulated scoring rules (Colby, Gibbs, Kohlberg, Speicher-Dubin, & Candee, 1979). With the support also of some countervailing evidence, provided for instance by a 20-year-old longitudinal study (Colby, Kohlberg, Gibbs, & Lieberman, 1983), the test continues in high vogue.

Damon (1977) also developed a free-response method of assessing moral reasoning, but his stories and stage structure differ from Kohlberg's in that they focus on "fair distribution and sharing of valued resources" which he considers the central concern of morality. He also felt a need for more child-oriented stories for work with younger children.

Because of certain problems with the free-response interview method, various objective-format moral reasoning tests based on Kohlberg's dilemmas have been developed, for instance, Rest's Defining Issues Test (DIT Rest, 1979). Carroll (1974) developed a multiple-choice format moral reasoning test, to be described below, as an adaptation of the DIT suitable for younger children. The advantages of the objective format, according to Rest (1979), are that assessment should be less affected by a subject's verbal expressiveness, and that the test and its administration are standardized as much as possible.

Another approach to assessing the internalization of moral values, adopted by Hoffman (1971), is to test the child's feelings of guilt regarding the misdemeanors of a projective story character with whom the child is expected to identify. Such guilt represents the emotional side of morality, or moral affect, and its intensity, following Hoffman (1971), is an indication of the child's internalization of moral rules.

Our main topic—the relation of moral judgment to action—has been one of the persisting themes and concerns in this area. Blasi (1980) firmly believes that whereas action should be the final criterion of moral development, moral cognition, too, plays a central role in moral functioning. Kohlberg (1978) considers, on the basis of his own evidence, that judgment and action are related, and takes the position that mature moral judgment is a necessary but not sufficient condition for mature moral action. He suggests that factors such as the situation and its pressures and the individual's "ego strength" may affect a person's actions over and above his level of moral maturity. Jurkovic (1980), in considering juvenile delinquents, concludes from a review of the evidence that, overall, there is a relationship between moral behavior (or its converse) and level of moral reasoning, and he attributes heterogeneity of moral reasoning within delinquent samples to personality variables. Mischel and Mischel (1976), on the other hand, expect poor prediction from attitudinal measures on the general ground of the specificity, or discriminativeness, of behavior.

In reviewing the literature on delinquency and moral reasoning, Blasi (1980) concluded that the evidence on the whole showed that moral judgment and action are related, with the qualification that the evidence is stronger in some areas than in others. He found that in all three studies that employed objective tests of moral reasoning (Rest, 1970; Carroll, 1974) as criteria, no differences between delinquents and nondelinquents were discovered, whereas nine out of 11 studies that used Kohlberg's MDI yielded positive findings. McColgan (1976, cited by Jurkovic, 1980) concluded, on the other hand, that the DIT had greater power in discriminating delinquents from nondelinquents than the MDI. Kohlberg (1978) found teachers' reports of children's moral behavior or conscience to be related to the MDI, but Santrock (1975) noted no such relationship. While the majority of findings are positive, the question is clearly not settled.

We pursued this question in two related investigations. In Study I the relationships among moral judgment, moral affect (fantasy guilt), and reported moral behavior were examined in the context of a broader investigation covering many different aspects of children's development (Lytton, Watts, & Dunn, 1986). In light of our experience in Study I, the field work of which was completed in 1980, Study II (Rogers, 1981) was designed specifically for the purpose of investigating the relationships among a variety of different measures of moral judgment, and between them and a report measure of antisocial tendencies regarded as the converse of moral behavior (cf. Blasi, 1980). The present set of studies adds to the relatively sparse literature relating moral reasoning to action in a normal population.

Study I

Study I was part of a larger investigation that examined the social and cognitive development of twins longitudinally from age 2 to age 9. One of the facets of this development is the degree of moral internalization that has taken place. Our purpose was to determine this and relate it to the more rudimentary form of internalized standards assessed at age 2. (Lytton, 1980, presents an account of the investigation at age 2.) Both moral internalization and overt compliance were assessed by reports of behavior. But it was hypothesized that level of moral reasoning and fantasy guilt would also be valid indicators of moral internalization. Two instruments, the Guilt Index (Hoffman, 1971) and the Moral Advice Test (Carroll, 1974), were used for this purpose.

Method

Sample

Thirty-five male twin pairs, both identical and fraternal, (out of 46 pairs studied at age 2) could be traced and agreed to participate in the complete follow-up procedure. Their mean age at the time of testing was 9 years 6 months, and the range 8 years 5 months to 10 years 8 months. The children came from both working class (two-thirds) and middle class (one-third) families.

The inclusion of twins in the larger investigation was relevant to the goals of that study, which included genetic factors, but has no special bearing on the studies of moral development presented here. Only boys were included in the earlier investigation in order to eliminate sex differences as a possible confounding factor in the study of parent-child interaction. Because the sample was thus restricted to males, the findings on moral development should not automatically be generalized to females.

Procedure

Measures of moral judgment and attitudes

(a) The *Guilt Index* (GI) was a semiprojective story completion task, based on the work of Hoffman (1971) and of Allinsmith (1960). One of the authors (Denise Watts) wrote an additional item to include, as heroes, a pair of twins. The Guilt Index contained four stories involving moral decisions related to lying, cheating, stealing, and failing to assist a person in distress. Each story beginning was read to the child in individual sessions and the subject was asked to finish the story by describing how the hero would feel, and so on. The child's responses were recorded on tapes which were later transcribed in full.

In scoring the responses we adopted the scoring guide provided by Hoffman (personal communication, 1979). A score on a 3-point scale was assigned according to the maximum level of guilt shown, ranging from severe to no guilt, and the scores for the four stories were summed.

Interrater reliability was established on 12 cases which were scored independently by two raters. The interrater reliability coefficient over the 12 subjects was .88.

(b) The second moral development measure, the *Moral Advice Test (MAT)*, was a test of internalized moral judgment. The test was adapted from the work of Carroll (1974), with some minor changes in order to allow for better comprehension by our younger subjects. Carroll's test is a modification of Rest's (1976) Defining Issues Test. It presents the subject with four Kohlberg-type moral dilemmas, each followed by 10 "advice" statements which give reasons for or against a certain course of action relating to the story. Each of Kohlberg's five stages of moral thought (his Stage 6 being viewed as an extension of Stage 5) is represented by two statements. For example, for the story concerning the publishing of a student newspaper protesting against some school rules in the face of the principal's prohibition, the Stage 3 statement runs: "You feel badly about the principal's problems, but you will feel much worse about letting your friends down. As long as you have your friends' support you should publish." The child is asked to rate this, and all other statements from "very good" to "very bad."

Carroll and Rest (1981) report Hoyt internal consistency coefficients that were higher at the lower stages (ranging from .74 at Stage 1 to .66 at Stage 3) than at the more advanced stages. While the test has face validity, the only evidence Carroll and Rest provide justifying the use of the test as a test of moral reasoning is (a) that in their study it correlated with achievement test scores (about .40) and (b) that rejection of lower stage reasoning showed a developmental age trend, that is, it increased with age. The test was chosen because it was one of the few individually administered tests of moral judgment which could be given to children as young as those in our study. The rating of statements furnished by the examiner was thought to be easier for young children than producing reasons themselves, something which Kohlberg's procedure requires.

The stories and the advice statements were read out to the children individually and the rating for each advice statement was recorded. Carroll and Rest suggest that rejections of lower-stage reasons would furnish an assessment of children's moral development. Following Carroll, therefore, originally a total rejection score for lower stage moral thought was calculated by summing the rejection scores for Stages 1 to 3. Because the analysis based on this total rejection score generated results that were in a direction opposite to theoretical expectations, we instead used "acceptance ratings" for Stages 4 and 5 as the summary statistics (i.e., "very good" was scored 4 on a 4-point scale). We thus assessed moral development by the acceptance of the more advanced levels of moral thought rather than by the rejection of lower levels. This analysis is presented below.

Measures of moral behavior

(a) The class teachers were given a 5-point rating scale which, among other characteristics, asked for ratings of the children's overt compliance and conscience, each defined in behavioral terms. "Compliance" was defined as overt compliance with teachers' directives and school rules. "Conscience" was defined as standards that the child had internalized in himself or herself and was measured by questions such as: "When he has been caught doing something wrong, how often does the child accept blame?"

(b) Mothers and fathers were given interviews which probed their perceptions of their children's characteristics, as well as their own child-rearing practices, with questions paralleling those used in the interview at age 2. Ratings on a 5-point scale for overt compliance with parents' requests and internalization of parental standards

("Conscience") were given by the interviewer, based on specific questions relating to these facets of the children's behavior. Questions regarding compliance included: "When you ask X to do something for you, does he do it right away, or do you have to ask him several times?" Questions regarding conscience included: "Does X usually obey the rules you have laid down without having to be reminded, or does he have to be reminded?" Two investigators independently rated six interview schedules. The interrater reliability coefficient for compliance was .94, for conscience .71.

(c) Teachers and parents were given the teachers' and parents' form, respectively, of the Children's Behaviour Questionnaire (CBQ, Rutter, 1967; Rutter, Tizard, & Whitmore, 1970) which is designed as a screening instrument for children's maladaptive behavior. This measure, in addition to a total maladjustment score, yields a subscore for antisocial behavior. Rutter, Tizard, and Whitmore (1970) report satisfactory reliability and validity for these scales.

Intelligence and achievement measures. Intelligence and achievement were assessed by the published measures shown in Table 1.

Results

Individual twins' scores are not independent of one another; for instance, they have the same values for demographic variables (e.g., sex, age, socioeconomic status [SES], etc.) on which children may be selected. Moreover, ratings of both twins are based on reports by mother (or father), that is, are derived from the same person, and the ratings of mothers' (and fathers') own characteristics, for example, warmth to each twin, are ratings of the same person. Correlations between twins for most characteristics were substantial in this study, reaching, for instance, .85 for antisocial tendencies among MZ pairs. To enter each twin's score separately into an analysis, therefore, would often amount to entering the same score twice. This leaves one with the option of either randomly sampling from the twin pairs, or of using the mean value of each twin pair as the unit of analysis. We have opted for the second approach for the reason that the twin pair mean is a more reliable measure of the twins' characteristics than is a randomly sampled member of the pair. Kraemer and Jacklin (1979) also consider that when one is dealing with nonindependent dyads, the use of pair means as the unit of analysis is a valid method, whereas entering both scores separately is not.

Table 1 shows the results for Study I. The correlations of the acceptance ratings (AR) are in the expected direction. Moral judgment is associated significantly (by independent tests) with SES, IQ, and achievement, and it predicts antisocial conduct negatively, and compliance and conscience positively. The correlations of the ARs of Stage 5 and of Stages 4 and 5 combined (not shown) are very similar.

The significance levels are based on individual significance tests. Given a fairly large number of tests, this is not strictly legitimate and these results must therefore be considered as tentative only. By the more rigorous standards of simultaneous confidence testing (Larzelere & Mulaik, 1977) the alpha level for accepting significance of individual correlations should be .003 to yield an experiment-wise alpha of .10 for 32 tests together. Under this procedure no result achieves significance.

For the GI only the correlation with the antisocial score (mother's rating) is significant by independent test, but not under simultaneous confidence testing. All other correlations, apart from that with age, are near zero, though generally in the expected direction. The GI's correlation with the MAT score is also near zero, thus indicating that the two tests measure different aspects of moral development: the affective versus the cognitive.

TABLE 1
Correlations of Guilt Index and Moral Advice
Test with Other Child Measures
Twin Pair Means (n : 35)

	Guilt Index	Moral Advice AR4
Guilt Index	—	— .06
Age	.52**	— .27
SES	.03	.33*
Intelligence and Achievement Measures		
Verbal IQ (Crichton Vocab. Test ^a)	.03	.43**
Nonverbal IQ (Raven's Matrices ^a)	— .09	.36*
Total IQ	— .03	.44**
Total PIAT ^b	— .08	.38*
Failed Grade	— .01	— .11
Moral Behavior Reports		
Antisocial Score (CBQ—Teacher)	— .06	— .41**
Compliance (TR)	.14	— .10
Conscience (TR)	— .05	.21
Antisocial Score (CBQ—Mother)	— .34*	— .17
Compliance (MR)	.12	.21
Conscience (MR)	.20	.35*
Antisocial score ^c (CBQ—Father)	.11	— .36
Compliance (FR)	— .01	.33
Conscience (FR)	— .16	.24

Note: TR: Teacher rating; MR: Mother report; FR: Father report; CBQ: Child Behavior Questionnaire; AR4: Acceptance rating, Stage 4.

^a Raven, Court, & Raven (1977);

^b Peabody Individual Achievement Tests (Dunn & Markwardt, 1979);

^c n for fathers' report: 28.

* $p < .05$, ** $p < .01$ —2-tailed test.

Because the MAT correlated .43 with Verbal IQ it was of interest to see whether this relationship accounted for the correlations between moral reasoning and moral behavior that we discovered. When Verbal IQ was partialled out from these latter correlations, we found, indeed, that no correlation between MAT and the behavioral measures remained significant, even by independent tests. Verbal IQ, however, did not account for the individually significant correlation between GI and Antisocial score (mother's report), because Verbal IQ correlated only .03 with GI.

Internalization of standards assessed behaviorally at age 2 (cf. Lytton, 1980) did not predict either the MAT or the GI, that is, it did not appear to be the precursor of cognitive moral development.

Study II

In view of the counterintuitive results arising from the rejection ratings of the "MAT" in Study I, Study II was undertaken first to see how the MAT related to Kohlberg's MDI and to Damon's Positive Justice Reasoning and what their underlying structure was, and secondly to ascertain how well each of these tests predicted a self-report measure of delinquent tendencies, taken as the converse of moral behavior. A

different measure of moral behavior from Study I was selected in order to see whether the MAT would perform similarly or differently with a new measure. A brief description of the method follows; further details can be found in Rogers (1981).

Method

Sample

The sample was recruited from all Grade 4 boys in two elementary schools in a lower socioeconomic area, in order to match the sample of Study I in sex and, roughly, in age. Full data were available for 47 boys with a mean age of 10 years 1 month, ranging from 8 years 3 months to 11 years 6 months.

Procedures

Intelligence measure

The subjects' recent percentile scores on the Canadian Lorge-Thorndike Intelligence Tests, verbal and nonverbal forms, were obtained from school board files. This test has been standardized on a Canadian population (Lorge, Thorndike, Hagan, & Wright, 1967) and its psychometric properties are satisfactory.

Measures of moral judgment

(a) *Moral Dilemma Interview* (MDI) (Kohlberg, 1978). This well-known test was administered to the children individually at school. Two stories—"Ben (Heinz) and the Drug" and "Joe Saves up for Camp"—were read out to the children. Questions and answers were tape-recorded and later transcribed.

The experimenter (Susan Rogers Maunula) was trained in scoring the responses by an associate of Kohlberg's, a worker at the Center for Moral Education and Development at Harvard University. After discussing five protocols and scoring them under his supervision, the experimenter scored the remaining protocols independently, using the latest scoring manual (Colby et al., 1979).

The Standard Scoring method was employed in which individuals' judgments are matched with structurally defined criterion judgments from the manual. A global stage score was calculated and, by assigning points for responses at each stage, a Moral Maturity Score (MMS) was also arrived at. Because the global stage score correlated .97 with the MMS, only the latter was entered into the analyses.

For the purpose of checking reliability, 12 protocols, not including the five on which agreement had been reached by discussion, were also rated independently by the Kohlberg research worker. The resulting reliability coefficients can be seen in Table 2. Further psychometric data on the MDI have been reported by Colby et al. (1983).

(b) *Positive Justice Reasoning Interview* (Damon, 1977). The method consists of a presentation of stories which focus on children in school- or play-related situations. Subjects are individually asked what the characters should do in fairness to everyone concerned. Of the areas of the child's thinking that Damon focuses on, "positive justice reasoning" is perhaps most closely related to the development of moral attitudes as conceived by Damon, Kohlberg, and others. We therefore concentrated on this realm but, owing to time restrictions, only the story concerning the sharing of the proceeds from the sale of pictures made by children was employed. This was read to the children individually following on the MDI, and the session was tape-recorded and later transcribed. Responses were scored in accordance with the manual (Damon, 1975) and a "major stage score" assigned for each subject.

For the purpose of establishing reliability, 20 protocols were randomly chosen and independently scored by the experimenter and a trained colleague. See Table 2 for the

TABLE 2
Interrater Reliability Results

Test	<i>n</i>	Correlation Coefficient	Percentage Reasonable Agreement	Percentage Perfect Agreement
MDI: MMS	12	0.61	58% (within 12 points)	17%
MDI: Global Score	12	0.77	83% (within 1/3 stage)	58%
"Positive justice reasoning interview"	20	0.85	100% (within 1 substage)	70%

Note. MDI: Moral Dilemma Interview; MMS: Moral Maturity Score.

reliability coefficients. Further data on reliability and internal consistency for these interview measures can be found in Damon (1977).

(c) *Moral Advice Test* (MAT) (Carroll, 1974). This test was described under Study I. In Study II the test was administered to small groups of subjects. The dilemmas with their corresponding advice statements were read to the children who also had the typed material in front of them. They then marked their choices in the test booklet.

Measure of moral behavior. In this study moral behavior was measured by its converse, namely delinquent or antisocial tendencies, as assessed by the subject's concurrence with statements in a self-report measure, the Jesness Inventory (Jesness, 1966), suitable for this age group. The Jesness Inventory is divided into subscales, and each statement relating to the individual's behavior or attitude is assigned to one or more of these subscales. Examples are: "I seem to blow up a lot over little things that really don't matter very much" (Manifest Aggression). "Police usually treat you dirty" (Alienation). "A lot of people say bad things about me behind my back" (Social Maladjustment).

Jesness (1966) reports that his Inventory correctly identified 84% of his subject population composed of 963 delinquent and 925 nondelinquent male juveniles ranging in age from 8 to 19. From a survey of other studies, plus their own results, Saunders and Davies (1976) conclude that "there is now good evidence for suggesting that the *social maladjustment*, *value orientation*, *alienation*, and *manifest aggression* scales are related to 'deviant personality'" (p. 35). These scales representing predelinquent attitudes were therefore administered in this study, a total of 104 questions.

Corrected odd-even reliability coefficients for individual subscales are reported by Jesness (1966). These range from the low .60s to the high .80s. Test-retest stability coefficients (over an eight-month period) range from .40 to the high .70s.

The test was administered as a group test following on the MAT. The children were told that the test consists of statements about the opinions and attitudes of young people. The statements were read out to the subjects and they indicated on the test form for each statement whether it applied to them.

Results

In order to clarify the underlying structure and interrelationships of the different types of measures, a principal factor analysis with Varimax rotation was run. The simple correlations can be seen in Table 3 and the factor matrix in Table 4.

The rotated factor solution satisfies Thurstone's criteria of "simple structure" extraordinarily well. Each factor represents one type of test: Factor 1—the Jesness scales; Factor 2—the multiple-choice Moral Advice Test; Factor 3—the open-ended moral judgment tests that require verbal production (Damon, 1975, 1977; Kohlberg, 1978, 1980); Factor 4—the intelligence tests. Some subsidiary loadings should be noted. Thus, Jesness' Manifest Aggression has a moderate negative loading on the intelligence factor; Jesness' Alienation has a very modest negative, and verbal intelligence has a good positive loading on the moral judgment factor (Factor 3). The four factors together account for a very high proportion (72.6%) of the total variance. However, the hypothesized negative relationship between antisocial tendencies and moral development materialized only in a very attenuated form—the loading of Alienation on the open-ended moral judgment factor.

When verbal intelligence was partialled out, the correlations between Alienation and the MDI and Damon's test were reduced further.

Discussion

Let us first discuss the structure and interrelationships of the different tests of moral reasoning.

Damon's tests and Kohlberg's MDI were closely related, showing very high loadings on the same factor in Study II. These are the free-response tests requiring spontaneous verbal production of reasons, and it appears they correspond to one cognitive function in the child. Verbal ability, it will be remembered, also loaded on this moral judgment factor, and one possibility is that what binds the two tests together is their common verbal procedure, that is, the factor may be a methods factor.

However, it seems their common variance is due to more than method or verbal ability. Further analysis revealed that the modal stage of responding for the MDI was Kohlberg's Stage 2, and for Damon's test it was his Stage 1A. The definitions of these respective stages, as it turns out, are very similar, both including the principle of equal sharing and exchange (cf. Colby et al., 1979; Damon, 1977). Hence it is clear that both tests elicit similar reasoning and thought structure from children at the modal stage. This suggests that, despite their diverse story content, the two tests tap similar kinds of moral thinking over and above verbal ability.

Nevertheless, there is a fairly consistent relationship between verbal ability and expressed moral reasoning, both in its objective-format form—Study I (the associations became nonsignificant in Study II) and in its free-response form—Study II.

A limitation of the study was that it used only one of Damon's stories. While the relationship between Damon's test and the MDI that we found is encouraging, it is conceivable that, because of this restriction, other possible associations of Damon's test may have gone unnoticed. In view of parallel findings for the MDI, however, this is unlikely.

Can objective tests be taken as equivalent to free-response tests in measuring moral reasoning? For the DIT, the main objective moral reasoning test, Rest reports correlations of about .40 with the MDI from several studies, using homogeneous age groups (Rest, 1979). Froming and McColgan (1979), however, found that once age, SES and intelligence were partialled out, the correlation between the tests dropped to a nonsignificant .16. Nor did the MAT relate to the free-response tests of either moral

TABLE 3
Correlations Among Measures Used

	JESM	JESVO	JESAL	JESMA	AR4	AR5	DAM	KMMS	IVERB	INONV
JESVO	.74									
JESAL	.67	.78								
JESMA	.56	.73	.50							
AR4	.06	.24	.17	.05						
AR5	-.05	-.01	-.04	-.12	.61					
DAM	-.14	-.11	-.17	-.04	.08	.15				
KMMS	-.05	-.04	-.24	-.08	-.07	.20	.42			
IVERB	-.29	-.29	-.35	-.30	-.31	-.01	.27	.34		
INONV	-.28	-.36	-.23	-.46	-.23	-.11	.08	.07	.56	
AGE	.17	-.08	.13	-.09	.05	.13	.00	-.04	-.27	-.10

Note: $r = 0.29$, significant at $p .05$, for $n = 47$

JESM: Jesness Social Maladjustment Scale; JESVO: Jesness Value Orientation Scale; JESAL: Jesness Alienation Scale; JESMA: Jesness Manifest Aggression Scale; AR4, AR5: Moral Advice Test—Acceptance Ratings, Stages 4 and 5; DAM: Damon's Positive Justice Reasoning; KMMS: Kohlberg Moral Maturity Score; IVERB: Verbal Intelligence; INONV: Nonverbal Intelligence.

reasoning or guilt in this investigation. Because the two types of test have little variance in common, they must elicit different thinking functions in the moral realm on which different children rank differently.

It is clear that the free-response and the objective-format tests differ in that the MDI presents a production task, the DIT (and MAT) a recognition task. Because the latter task is cognitively easier, children achieve higher stage reasoning on the objective test, as found by Rubin and Trotter (1977). Our investigation produced a similar finding, because Stage 4 was the most accepted stage on the MAT in both Studies I and II, whereas Stage 2 was the modal stage for the MDI.

The main question of this investigation was the relation between moral thought (or feeling) and moral behavior. Of all the tests we employed, only the acceptance ratings of the MAT generated individually significant associations with several measures of moral behavior in one study, but they were not significant under simultaneous confidence testing, and these associations were not replicated in the second study. Furthermore, verbal ability accounted for the "significant" associations in Study I. Once this is taken out, moral reasoning and behavior appear to be independent areas of functioning. This conclusion was confirmed by Study II, both for the objective-format and the free-response tests, except for a weak negative relation between feelings of alienation and moral judgment.

Indeed, verbal intelligence was a better (negative) predictor of antisocial tendencies than the moral judgment tests in Study II. It should be noted that both Kohlberg and Damon used their tests with 10-year-olds, and hence it does not seem unreasonable for others to employ them for this age group. In view of the demonstrated validity of the Jesness Inventory, it is not likely that the absence of prediction can be attributed to any inadequacy of this test as an index of delinquent tendencies.

The Guilt Index produced one association (significant only under independent testing), namely with antisocial conduct as rated by mother. Moral affect, therefore, seems to be somewhat predictive of moral behavior. Intensity of feelings about (imaginary) transgressions may well inhibit a person from committing such transgressions, because it is an expression of "conscience" as conceived popularly and in psychoanalytic thought.

Blasi (1980) and Jurkovic (1980) both conclude that the majority of studies they reviewed showed heterogeneous delinquents to evince less mature moral reasoning

TABLE 4
Varimax Rotated Factor Matrix

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Communality
JESM	.76	.01	-.10	-.13	.61
JESVO	.98	.09	.01	-.14	.98
JESAL	.79	.11	-.30	-.01	.73
JESMA	.68	-.12	.05	-.38	.62
AR4	.11	.76	-.04	-.14	.62
AR5	-.07	.80	.22	-.01	.69
DAM	-.08	.10	.52	.03	.29
KMMS	-.05	.03	.68	.04	.46
IVERB	-.20	-.21	.52	.60	.71
INONV	-.25	-.14	.04	.78	.68
AGE	.01	.16	-.15	-.10	.06
Summed square factor loadings after rotation	2.75	1.36	1.17	1.17	
Percent of estimated common variance	42.6	21.1	18.1	18.1	

Note: For variable names see Table 3.

levels than their nondelinquent counterparts. An inspection of the studies they list, however, reveals that if one confines oneself to published studies that contrast delinquents with nondelinquents, the majority is very thin. These investigations compared the moral reasoning levels of matched groups, the delinquent groups having an extreme character, in that they consisted of persons who had been legally declared offenders. Our study differs from these, because we sought an association between degrees of moral reasoning and a continuum of delinquency-proneness in a normal population and because our sample was younger, and these differences may in part explain the divergent findings.

Some possible reasons mentioned by Kohlberg (1978) for discrepancies between moral reasoning and moral behavior are referred to in the introduction to this paper. Such considerations can be summed up by Rest's statement "moral judgment is an important factor in real life decision-making, but . . . the interaction with other factors . . . complicates the relationship so that simple, linear correlations cannot be expected" (Rest, 1979, p. 260). Nevertheless, "moral" reasoning must derive its validity as a "moral" indicator from some relationship to what is generally recognized as "moral" behavior. This can be demanded particularly when the measure of moral behavior is based on many situations, as in ratings or self-reports. The absence of such a relationship between thought and deed must weaken the claims to validity and usefulness of the moral judgment model and of cognitive developmental theory in general insofar as it applies to the moral domain.

Findings such as ours also have implications for moral education. Moral education has often been carried on by means of discussions of moral dilemmas, such as Kohlberg posed. Kohlberg himself in the 70s became dissatisfied with the discussion approach as a means of moral education (Kohlberg, 1980). A critical ingredient of moral education, he came to believe, was social participation. Hence his later attempts at moral education have emphasized self-governance in small schools, where students have to consider the moral implications of realistic school issues and practice moral behavior within a group that attempts to be a "just community" (Power & Reimer, 1978).

Discussions of moral dilemmas in the Kohlberg tradition emphasize structure (i.e., the reasoning behind moral decision rather than the decision itself). But it may be important for moral education to deal not only with the structure of moral judgments, but also with their content, that is, the specific situations and areas of behavior that generate moral dilemmas (Locke, 1983). Moreover, because the relationships of moral reasoning to behavior are uncertain, it may be more effective to inculcate moral values and try to enhance other factors that affect moral behavior, for example, ego strength and motivation.

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The Etiology of Administrator Burnout

Both quantitative and qualitative research methods were used in an attempt to explore more fully the nature of burnout among 128 school-based administrators in a large western Canadian urban school district. Administrators in general recorded lower than normal levels of burnout, although some 34% recorded a higher than normal level of Personal Accomplishment burnout. Major predictors of burnout were Overall Work Stress, Satisfaction with Status and Recognition, and Satisfaction with Interpersonal Relationships. The qualitative data were supportive of these findings, with administrators indicating that work load, interpersonal relationships, and lack of sufficient positive feedback were major contributors to feelings of burnout. These findings point to the importance of developing coping skills among administrators who experience work stress. Further, the findings indicate that the cultivation of human relations skills and the adequate provision of rewards and recognition are important in dealing with burnout among school-based administrators.

Interest in burnout as it affects both individuals and organizations has shown exceptional growth in recent years. This interest, however, cuts a broad swath, and therefore lacks uniformity in its conceptualization of burnout and in the methodologies used to measure the syndrome. The numerous studies, such as those of Anderson and Iwanicki (1984) and Farber (1984), are primarily quantitative in nature. Only few studies such as those by Blase (1982, 1986) have attempted a qualitative approach in examining burnout, particularly among educators. Even fewer studies have attempted to triangulate research (Jick, 1979) in an exploration of burnout. In addition to this narrow methodological approach, many studies of burnout in education have focused on teachers' experiences of the syndrome. There are indications, however, that researchers are becoming more aware of the unique pressures and demands on school-based administrators which may lead to stress and burnout (Gmelch & Swent,

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1984; Kottkamp & Travlos, 1986; MacPherson, 1985; Ratsoy, Sarros, & Aidoo-Taylor, 1986). The study reported in this article was undertaken in response to some of these methodological and conceptual inadequacies in the data base on administrator burnout.

Purposes

The purposes of this study were to describe the nature of burnout among school-based administrators, to examine the extent to which selected job factors predicted burnout, and to describe the work conditions administrators identified as major contributors to feelings of burnout.

To fulfill these objectives three questions were examined: (a) What is the nature of burnout among school-based administrators? (b) To what extent do overall work stress, job satisfaction, role clarity, and job challenge predict burnout among administrators? (c) Which work conditions do administrators identify as contributing most to feelings and attitudes associated with each subscale of burnout as defined by Maslach and Jackson (1981a), namely Emotional Exhaustion, Depersonalization, and Personal Accomplishment burnout?

Background to the Study

Various conceptualizations and definitions of burnout exist (Carrol & White, 1982; Cherniss, 1980a; Freudenberg, 1974, 1975; Gmelch, 1983). However, a widely-used conceptualization of the syndrome is provided by Maslach and Jackson (1981a). Generally, burnout has been linked to the psychological, physiological, and behavioral responses to chronic work stress experienced by helping service professionals such as social workers, counselors, teachers, and police officers. Maslach and Jackson (1981a, 1981b) identified the three subscales of Emotional Exhaustion, Depersonalization, and Personal Accomplishment burnout as together constituting the burnout syndrome. They also developed the Maslach Burnout Inventory (MBI) to measure varying degrees of burnout on each of the three subscales.

Emotional Exhaustion burnout refers to feelings of physical and emotional overextension and exhaustion caused by daily work pressures. Maslach (1982) defined this type of burnout as "a pattern of emotional overload . . . [where people] lack energy to face another day" (p. 3). Depersonalization burnout refers to the development of negative attitudes, such as cynicism and negativism, in which one's clients and co-workers, according to Maslach and Pines (1977) "are labeled in derogatory ways and treated accordingly" (p. 101). Personal Accomplishment burnout appears to be more responsive to the motivational needs of helping service professionals. Maslach and Jackson (1981a) described this form of burnout as "the tendency to evaluate oneself negatively, particularly with regard to one's work with clients" (p. 1).

Each of the variables used as predictors of burnout, namely work stress, job satisfaction, role clarity, and job challenge, was chosen on the basis of research findings which suggest a need for further examination of these variables as they relate to burnout (Meier, 1984).

The first variable explored as a predictor of burnout was overall work stress. While various studies have examined the relationship between stress and burnout such as those of Cedoline (1982), Friesen (1986), and Gmelch (1983), there is insufficient evidence to describe the extent to which burnout as measured by the MBI is related to work stress. This scarcity in the data base is even more prevalent in an educational context. The concept of stress which was proposed by Cox and Mackay (1981), Lazarus and Launier (1978), and McGrath (1976) was adopted for purposes of this study.

In this conceptualization stress is viewed as a distressful response to a demanding situation that is perceived as exceeding the person's resources and capabilities for meeting the demand. This transactional concept of stress extends beyond the physiological interpretation of stress identified by Selye (1956, 1974), and includes the fundamental everyday, interactive relationships among individuals, organizations, and environments as leading to stress.

Aspects of job satisfaction were also examined as predictors of administrator burnout. Maslach and Jackson (1981b) suggested that satisfaction and burnout are conceptually different, and that job satisfaction explains only a small percentage of the variance in any one subscale of burnout. Moreover, many studies have isolated overall job satisfaction as a predictor of burnout, without addressing those individual work conditions which contribute to both satisfaction and burnout. Recent research by Kottkamp and Travlos (1986) illustrated a significant negative correlation between job satisfaction and Emotional Exhaustion burnout ($r = -.61$) for high school principals. Research by Anderson and Iwanicki (1984) indicates that specific facets of the job which contribute to satisfaction may also predict burnout. On the basis of these inconclusive findings, further research is needed to explore the extent to which identifiable factors of job satisfaction predict burnout among school-based administrators.

The third variable explored as a predictor of burnout in this study was role clarity (i.e., the absence of role ambiguity). Numerous research findings indicate a positive correlation between role ambiguity and stress and burnout. The evidence suggests that clearer and more informed job descriptions both mitigate levels of stress and burnout and contribute to job satisfaction (Cherniss, 1980a; Litt & Turk, 1985). Nonetheless, the relationship between role clarity and burnout, particularly among school administrators, is somewhat tenuous as indicated by the research of Farkas (1984) and others. Further exploration of this relationship is warranted on the basis of these and other related research findings.

Job challenge was examined as the fourth predictor of burnout among school-based administrators. Walsh, Taber, and Beehr (1980) described job challenge as the "degree to which the knowledge, skills and abilities of the role incumbent are perceived to be engaged or enlarged by the job" (p. 255). Studies by Holroyd and Lazarus (1982) indicate that increased job challenge both contributes to job satisfaction and assists in the alleviation of stress and burnout. However, the extent to which job challenge predicts burnout among school-based administrators is largely speculative, and for this reason further research into this relationship is justified.

Method

Both quantitative and qualitative research techniques were used in order to investigate the nature of burnout among school-based administrators. These techniques reflected the exploratory and descriptive design of the study, which was concerned with an identification of underlying variables that are representative of more specific and substantive states or conditions (Kerlinger, 1973).

Sample

A study was conducted of 763 educators (635 teachers and 128 administrators) in a large western Canadian school district (Sarros, 1986). The 128 school-based administrators from this sample are the focus of this paper. These administrators consisted of 66 principals and 62 assistant principals, representing a return rate of 82% and 77% respectively. Based on the results of *t*-tests which revealed no statistically significant

differences in the mean scores of principals and assistant principals on each subscale of burnout and for each predictor of burnout, the two groups were treated as one, the administrator group.

About 83% of administrators were male. The average number of years as an educator was 21. About 44% had 10 or fewer years experience as an administrator, 45% reported 11 to 20 years, and 11% had 21 or more years administrative experience. Approximately one-quarter of all administrators indicated their work was considerably stressful, 8% very stressful and 2% extremely stressful. Nonetheless, 62% were very to extremely satisfied with their work. Forty-seven percent of administrators were located in elementary schools, 28% in elementary-junior high schools, and 25% in secondary schools.

Instrumentation

A 72-item survey questionnaire was used in the collection of data. This questionnaire contained five sections: (a) respondent demographic information, including an item on overall work stress; (b) a job satisfaction instrument; (c) a job characteristics instrument; (d) the MBI (Maslach & Jackson, 1981a); and (e) a personal comments section. Overall work stress was measured on a six-point scale ranging from one (1) for "Not Stressful" to six (6) for "Extremely Stressful."

The 26-item job satisfaction instrument used in this research was developed from the Minnesota Satisfaction Questionnaire: Short Form by Weiss, Dawis, England, and Lofquist (1967), the Satisfaction with Teaching and Employment Conditions Questionnaire by Holdaway (1978), and the job satisfaction questionnaires by Gunn (1984) and Rice (1978). Administrators were requested to rate each item in response to the statement "*In your present position, indicate how you feel about each of these aspects.*" Responses on a six-point scale were as follows: 0=Dissatisfied; 1=Slightly Satisfied; 2=Moderately Satisfied; 3=Considerably Satisfied; 4=Very Satisfied; and 5=Extremely Satisfied. The Spearman-Brown split-half reliability for the instrument established as a result of pilot tests among school-based and district-based teachers, administrators, as well as personnel from medicine and engineering, ranged from .93 to .95. A principal components factor analysis using Varimax rotation and iterations yielded seven factors. These factors accounted for 65.2% of the variance in job satisfaction based on responses from school-based educators. The seven factors and their constituent items were as follows:

1. Satisfaction with Status and Recognition refers to the sense of status and recognition associated with the job, and the intellectual stimulation and sense of accomplishment provided;
2. Satisfaction with Autonomy refers to the freedom given educators to use their own judgments and methods;
3. Satisfaction with Interpersonal Relationships refers to interactions with peers, subordinates, and superordinates;
4. Satisfaction with Advancement refers to methods used in evaluation and promotion;
5. Satisfaction with Security and Involvement refers to the items of job security, and the chance to help other people;
6. Satisfaction with Work Load refers to the amount of work and the extra tasks of teaching and/or administration;
7. Satisfaction with Salary and Benefits refers to salary and fringe benefits.

These factors of job satisfaction were used as predictor variables of each subscale of burnout intensity as measured by the MBI.

The job characteristics instrument developed by Walsh, Taber, and Beehr (1980) was used to measure the factors of Role Clarity and Job Challenge. Respondents were asked to indicate the extent to which each component of the job characteristics occurred on the job. Responses were on a six-point scale as follows: 0=Not at all; 1=Rarely; 2=Sometimes; 3=Frequently; 4=Often; and 5=Always. Walsh, Taber, and Beehr (1980) reported reliability coefficients of .71 and .73 for the role clarity and job challenge scales respectively. Content validity was established through studies by Beehr, Walsh, and Taber (1976) and Walsh, Taber, and Beehr (1980).

An amendment to the job characteristics scale was the rewording of Item 3 on the role clarity scale to avoid reverse scaling. A factor analysis of the revised instrument revealed that each item loaded above 0.40 on the factors Role Clarity and Job Challenge as indicated by the test developers. These two factors accounted for 69.1% of the variance in job characteristics based on responses from school-based teachers and administrators. The factors and their constituent items included the following: (a) Role Clarity refers to clearly-stated performance standards, goals, and directives; (b) Job Challenge refers to the opportunities provided educators to use their skills and abilities, and to keep learning new things on the job. These factors of job characteristics were used as predictor variables of each burnout subscale.

The MBI developed by Maslach and Jackson (1981a, 1981b) was used to measure each subscale of burnout intensity for respondents in this study. The intensity dimension only was chosen based on recommendations by Iwanicki and Schwab (1981). Burnout intensity was measured on an eight-point scale ranging from zero (0) for "Never" to seven (7) for "Major, Very Strong." Maslach and Jackson (1981a) calculated Cronbach's coefficient alpha as a measure of internal consistency for each subscale. The coefficients for each subscale of burnout intensity were the following: Emotional Exhaustion (.87), Depersonalization (.76), and Personal Accomplishment (.73).

A factor analysis of the responses of educators on the Maslach Burnout Inventory revealed that every item in the 22-item inventory loaded above 0.40 on the factor indicated by the test developers. The three factors of Emotional Exhaustion, Depersonalization, and Personal Accomplishment burnout accounted for 51.5% of the variance in burnout intensity. The intercorrelations among all factors and burnout subscales for administrators are presented in Table 1.

The personal comments section included three questions derived from Maslach and Jackson's (1981a) definition of the three dimensions of burnout as follows: (a) Which two factors in your work contribute most to feelings of being overextended and exhausted by your work? (b) Which two factors in your work contribute most to the development of negative attitudes and impersonal responses toward clients? (c) Which two factors in your work contribute most to feelings of a lack of personal accomplishment on the job?

Assumptions and Limitations

One of the assumptions for this study was that burnout and related concepts are persistent feelings which can be measured in a statistical manner, and that burnout is a negative feeling in the respondent. Further assumptions were that the respondents provided accurate responses to the items, and that the resultant scores are reliable estimates of the degree of burnout experienced by the respondents. These assumptions place limitations on the degree to which the findings of the study are truly representative of burnout in these school administrators.

TABLE 1
Pearson Correlation Coefficients Between Overall Work Stress,
Job Satisfaction, Job Characteristics, and Burnout Subscales for
Administrators ($N=128$)

Work Stress, Factors, and Overall Burnout Subscales	Work Stress	1	2	3	4	5	6	7	8	9	EE	DEP	PA
<i>Job Satisfaction Factors</i>													
1. Status and Recognition	-.21	1.00											
2. Autonomy	-.13	.78	1.00										
3. Interpersonal Relationships	-.19	.59	.53	1.00									
4. Advancement	.00	.48	.43	.23	1.00								
5. Security and Involvement	-.16	.52	.48	.47	.29	1.00							
6. Work Load	-.39	.62	.51	.33	.42	.30	1.00						
7. Salary and Benefits	.01	.30	.27	.17	.51	.23	.34	1.00					
<i>Job Characteristics Factors</i>													
8. Role Clarity	-.24	.54	.40	.42	.31	.32	.50	.11	1.00				
9. Job Challenge	-.02	.54	.55	.40	.22	.45	.32	.12	.53	1.00			
<i>Burnout Subscales</i>													
Emotional Exhaustion (EE)	.48	-.29	-.23	-.24	-.19	-.25	-.39	-.05	-.25	-.10	1.00		
Depersonalization (DEP)	.23	-.27	-.26	-.23	-.07	-.19	-.08	.04	-.13	-.19	.52	1.00	
Personal Accom- plishment (PA)	.00	-.35	-.36	-.40	.04	-.38	-.13	.07	-.13	-.34	.30	.40	1.00

Data Analysis

The major statistical technique used in this study was multiple stepwise linear regression analysis. Weiss (1976) mentioned that the incremental procedure of multiple regression works from the "bottom up." In this procedure, variables are added which have the highest relationship with the criterion variable, as indicated by their partial correlations with the criterion. As variables are added, the multiple correlation is recomputed at each step until the increments in the multiple correlation coefficient (R) become no longer statistically significant. In this study, the criterion variable was represented by each subscale of burnout intensity.

Qualitative data were subjected to content analysis as outlined by Bogdan and Biklen (1982). Content analysis is used to tabulate data or information in a meaningful, systematic, and objective manner. According to Carnoy (1979, p. 64) content analysis is appropriate "when source material is used to complement some other kind of data during an inquiry into attitudes."

As a first step, the content analysis of a random sample of open-ended responses by two independent coders yielded categories and subcategories of sources of burnout. The interrater reliabilities for the coding of these responses ranged from .83 to .88. Once these categories were established all the questionnaires were included in the analysis of responses to the three open-ended questions. The total frequency of each category and the frequency with which each category appeared in each burnout scale were determined. These findings were then compared with those obtained in the regression analysis of the quantitative data.

Findings

The Nature of Burnout Among Administrators

Maslach and Jackson (1981a) established norms and cut-off points for low, moderate, and high levels of burnout based on their studies of 2,118 helping service professionals. These cut-off points were used to establish a normative distribution, with one-third of the respondents in each of the low, moderate, and high burnout categories. The cut-off points and distributions so established were used to determine the percentage distributions of respondents in this study in each burnout subscale, as presented in Table 2. For matters of consistency, the scores for Personal Accomplishment burnout were reversed. Thus administrators who reported relatively high levels of burnout would register higher than normal scores on each burnout subscale. As indicated in Table 2, the mean scores of administrators for the first two subscales of burnout were lower than their corresponding norms. Fewer than 10% of administrators reported high degrees of Emotional Exhaustion and Depersonalization burnout, compared with 33.6% who reported a high degree of Personal Accomplishment burnout. These findings indicate that school-based administrators tended to experience less burnout compared with other groups of helping service professionals.

Predictors of Burnout Among Administrators

The results of multiple stepwise linear regression analysis for prediction of burnout in administrators are presented in Table 3.

For Emotional Exhaustion burnout, Overall Work Stress was the major statistically significant predictor, contributing 23% to the total variance in this subscale. "Satisfaction with Work Load" contributed an additional 5% to the variance in Emotional Exhaustion burnout. As indicated by the negative correlation coefficient, the less satisfied administrators were with their work load, the more they tended to experience Emotional Exhaustion burnout.

Depersonalization burnout was best predicted by Satisfaction with Status and Recognition, followed by Overall Work Stress and Satisfaction with Work Load. When taken together these factors contributed 14% to the total variance in this subscale.

Satisfaction with Interpersonal Relationships contributed 16% to the variance in Personal Accomplishment burnout in administrators. The predictors combined contributed 28% of the variance in this subscale of burnout. In all cases, Role Clarity and Job Challenge did not enter as statistically significant predictors of burnout.

Work Situations Contributing to Burnout

The frequency with which work conditions were identified by administrators as contributing most to feelings and attitudes associated with burnout is presented in Table 4. As shown in the first column, interpersonal relationships were mentioned 104 times by the 128 administrators, followed by perceived pressures from higher authorities (69), work load (64), attitudes of parents and public (56), insufficient time (49), negative feedback (40), excessive demands (37), interactions with students (36), and self-concept (25).

Further analysis revealed that interpersonal relationships were viewed as major contributors to all three dimensions of burnout. Thirty-eight percent of administrators claimed these relationships contributed to feelings of Depersonalization burnout. A further 26% claimed interpersonal relationships led to Emotional Exhaustion burnout, and 18% identified Personal Accomplishment burnout as a result of unsatisfactory interpersonal relationships. Selected illustrative comments of administrators all with at least 15 years of experience are provided as further insights into work conditions contributing to burnout.

TABLE 2
Comparison of Administrator Sample with Established Norms
of Burnout Intensity (N=128)

Burnout Subscale	Lower Third	Middle Third	Upper Third	Mean	Norm
Emotional Exhaustion	66.4 ^a	28.1	5.5	2.54	3.52
Depersonalization	55.5	35.1	9.4	1.42	2.34
Personal Accomplishment	28.1	38.3	33.6 ^b	2.02	2.04

Note: ^a This means that 66.4% of administrators indicated a low degree of Emotional Exhaustion burnout.
^b This means that 33.6% of administrators indicated a high degree of Personal Accomplishment burnout.

TABLE 3
Stepwise Multiple Regression Analysis
for Prediction of Burnout Among Administrators
(N=128)

Dependent Variable	Predictors	B	r	R	R ²
Emotional Exhaustion	Overall Work Stress	.473	.48	.48	.23
	Satisfaction With Work Load	-.278	-.39	.53	.28
	(Constant)	1.845			
Depersonalization	Satisfaction With Status of Recognition	-.541	-.27	.27	.07
	Overall Work Stress	.308	.23	.32	.11
	Satisfaction With Work Load	-.284	-.08	.37	.14
	(Constant)	1.360			
Personal Accomplishment	Satisfaction With Interpersonal Relationships	-.291	-.40	.40	.16
	Satisfaction With Security & Involvement	-.309	-.38	.46	.21
	Satisfaction With Advancement	.231	.04	.49	.24
	Satisfaction With Autonomy	-.245	-.36	.53	.28
	(Constant)	4.684			

TABLE 4
Work Conditions Identified by Administrators
as Contributing to Burnout
(N=128)

		Burnout Dimensions					
	Work Conditions Identified	Emotional Exhaustion		Depersonalization		Personal Accomplishments	
		N	%	N	%	N	%
Interpersonal relationships	104 ^a	33 ^b	26 ^c	48	38	23	18
Perceived pressures from authorities	69	33	26	13	10	23	18
Work load	64	49	38	0	0	15	12
Attitudes of parents and public	56	20	16	25	20	11	9
Insufficient time	49	23	18	13	10	13	10
Negative feedback	40	3	2	6	5	31	24
Excessive demands	37	11	9	17	13	10	8
Interactions with students	36	15	12	13	10	8	6
Self-concept	25	0	0	13	10	12	9
Changing curricula	3	3	2	0	0	0	0

^a “Interpersonal relationships” were mentioned 104 times as major contributors to burnout by 128 administrators.

^b “Interpersonal relationships” were mentioned by 33 administrators as major contributors to Emotional Exhaustion burnout.

^c “Interpersonal relationships” were mentioned by 26% of the administrators as major contributors to Emotional Exhaustion burnout.

Interpersonal relationships. The quality and intensity of interpersonal relationships contributed to each form of burnout among school-based administrators. Of particular concern was the conflict caused by differences in ideologies and values between administrators and their staff. For instance, a male elementary school principal wrote of teachers who were “unwilling to accept their responsibilities as professionals” as leading to his feelings of cynicism and negativism associated with Depersonalization burnout. This finding supports Cherniss’ (1980b) claims that “differences in personal values” contribute to conflict, mistrust, and burnout among helping service professionals (p. 121).

Feelings of Emotional Exhaustion burnout occurred because of the “constant bombardment of people,” according to a male senior high assistant principal. A male junior high principal commented on the “lack of cooperation among your staff” as contributing to Personal Accomplishment burnout. The finding that stressful interpersonal relationships contributed to each type of burnout among school administrators is consistent with the claims of Welch, Medeiros, and Tate (1982) that a “principal’s interactions with people are almost always negative” and contribute to burnout (p. 47).

Perceived pressures from authorities. The policies and directives from central office, local school boards, and the Department of Education contributed substantially to feelings of Emotional Exhaustion and lack of Personal Accomplishment. A female elementary-junior high principal was confused and exhausted by “too many demands outside the school (central office, etc.) . . . [which] take me away from the responsibilities of my school.” A male elementary school principal wrote of the “lack of input into major decisions” as contributing to feelings of Personal Accomplishment burnout.

Work load. Administrators identified an excessive work load as leading to feelings of Emotional Exhaustion and Personal Accomplishment burnout. A male elementary school principal claimed exhaustion by “Working in an environment where everything should have been completed ‘yesterday.’ The paper ‘blizzard,’” the unrelenting pressure of deadlines, and the need to satisfy a variety of clients and to complete numerous administrative duties led one male elementary principal to “feel [I am] not doing an outstanding job.” These findings reveal that the demanding nature of school administration is not only a fact of school life as documented by Willis (1980) and Wolcott (1973), but is also a major contributor to stress and feelings of burnout as found by MacPherson (1985) and Ratsoy and Friesen (1985).

Attitudes of parents and public. Some administrators indicated that the increasing and often unreasonable expectations of parents and various publics contributed to the development of negative attitudes and cynical responses in themselves. Cherniss (1980b), Freudenberg (1977) and Maslach and Pines (1977) identified these responses as indicators of Depersonalization burnout. As an example, a male elementary-junior high school principal commented on “parents who do not give schools credit or trust” as leading to feelings of Depersonalization.

Insufficient time. The perceived lack of time to accomplish tasks led to each form of burnout, but predominantly to Emotional Exhaustion burnout. A male elementary-junior high assistant principal was exhausted by “[not] having enough time to accomplish (and do well) the things that can be done.” The “pressure of deadlines” contributed to feelings of negativism and cynicism in a female elementary school principal. A male elementary-junior high principal experienced feelings of Personal Accomplishment burnout because of “the lack of time to really sit down and discuss issues with staff.”

Negative feedback. About one-quarter of the administrators claimed that inadequate or negative feedback contributed to Personal Accomplishment burnout. The comments of a female elementary school assistant principal are fairly representative of this attitude: "Only hear negative responses. Not often given 'a pat on the back.'" This lack of feedback reinforced the beliefs of many administrators that their jobs were often unrecognized, unrewarded, and always criticized. Cherniss (1980b) stressed the importance of public recognition and feedback from peers as "critical resources" in helping to prevent burnout. Maslach (1982, p. 19) claims that professional helpers "don't hear much when things are going right, but they sure hear plenty when things are going wrong." Negative feedback was not cited as a major contributor to the other two forms of burnout.

Excessive demands. The intraschool factors of resource availability, physical working conditions, and staff needs contributed somewhat to all three forms of burnout. A female elementary-junior high principal identified school size as a contributor to Depersonalization burnout: "Too many demands which take me away from the personal side . . . The size of the school contributes to this." Feeling powerless to alter significantly one's working conditions, Cherniss (1980b) maintained, "would contribute to greater stress and the maladaptive coping pattern associated with . . . burnout" (p. 100).

Interactions with students was seen as contributing somewhat to all three dimensions of burnout. Self-concept concerns contributed somewhat to Depersonalization and Personal Accomplishment burnout. Changing curricula was mentioned only three times as a source of burnout.

Discussion

The Nature of Burnout

The findings of this study as indicated in Table 2 reveal that school-based administrators recorded lower overall mean scores than the established norms for Emotional Exhaustion and Depersonalization burnout, and a mean score similar to the norm for Personal Accomplishment burnout. The administrator distribution when compared with the normative distribution of burnout revealed that most administrators experienced low to moderate levels of each form of burnout. These findings are consistent with the research of Gorton (1982), Hiebert and Basserman (1986), and Ratsoy and Friesen (1985) which reveal that school-based administrators are experiencing lower levels of stress and burnout than previously expected. Apparently the oft-heard claim that school administrators are "survivors" in the school system cannot be dismissed too lightly. School administrators may have learned how to cope with the demands of administration and the various developments in their career paths. These survival skills may in part be conditional on an informed social support network (Ratsoy et al., 1986, p. 280) which helps them deal with work stress and burnout. Future research may explore the strategies administrators use to help them cope with burnout on the job.

Predictors of Burnout Among Administrators

The findings of this study are consistent with other research findings that work stress and burnout are related (Blase, 1982; Gmelch, 1983; Kottkamp & Travlos, 1986). Nonetheless, this study has added new evidence to this relationship by indicating that work stress in combination with other work factors contributes differentially to the variance in each subscale of burnout. In particular, more of the variance in Emotional Exhaustion burnout compared with the other two subscales is explained by Overall

Work Stress and Satisfaction with Work Load. The significant negative correlation between satisfaction with work load and stress ($r = -.39$, $p < .01$, Table 1) and the contribution of these two variables to burnout are fairly well documented in the literature and research (Blase, 1986; Farber, 1984; Friesen, 1986; Gmelch, 1983; Kottkamp & Travlos, 1986).

The differences in the etiologies of each burnout subscale may be further understood by comparing the predictors of Emotional Exhaustion burnout with those for Depersonalization and Personal Accomplishment burnout. In the case of the latter two subscales, the major predictors were Satisfaction with Status and Recognition and Satisfaction with Interpersonal Relationships respectively. These two subscales may be more the result of a job which is perceived as failing to satisfy the motivational needs of recognition, feedback, and sense of accomplishment among administrators, rather than the result of work stress as is Emotional Exhaustion burnout. Maslach's (1982) belief that failure of the job to satisfy the needs to be "admired and respected by other people" (p. 65) contributes to burnout is borne out by the findings of this study. Although Overall Work Stress and Satisfaction with Work Load contributed a further 6.4% to the variance in Depersonalization burnout, the total variance explained was less than 14%. Other work factors not measured by the research instruments used in this study may contribute to this form of burnout, and additional research is recommended in an examination of these work factors and their relationships to burnout.

The finding that Satisfaction with Interpersonal Relationships and other contextual factors contributed to Personal Accomplishment burnout concurs with various studies. Welch et al. (1982) claimed that stressful interpersonal relationships are related to the lack of sufficient training in human relations skills. This deficiency, the authors maintained, "condemn[s] the principal to at least partial failure all the time, and contributes to burnout" (p. 48). When these interpersonal interactions are combined with the frustrations which arise from a job that restricts involvement, autonomy, and advancement, it is not surprising that some school administrators begin to doubt their achievements on the job. A higher than normal level of Personal Accomplishment burnout in many cases, as the results of this study reveal, would therefore not be unexpected. Many school systems may have to be prepared for the challenge of guarding against this tendency of administrators to undervalue their accomplishments at work.

The results of this study revealed that both Role Clarity and Job Challenge were not statistically significant predictors of burnout for administrators. The finding that Role Clarity did not predict burnout is consistent with research by Bedeian, Armenakis, and Curran (1981) who found no significant relationships among role ambiguity, organizational level of responsibility, and stress for 202 nursing personnel. Further explanation of the tenuous relationships among Role Clarity, Job Challenge, and burnout may be derived from the findings of Walsh et al. (1980). Their study of 957 employees in a large manufacturing company indicated that when used together with job satisfaction, "more of the variance in job satisfaction can be accounted for by considering the effects of challenge and role clarity simultaneously than by considering either one separately" (p. 255). In the present study, factors of job satisfaction may have explained most of the variance in burnout otherwise attributable to Role Clarity and Job Challenge. Future research, therefore, may explore the influence on burnout of both these factors when used independently of job satisfaction.

Work Conditions Contributing to Burnout

Some striking similarities are obvious when the work conditions administrators identified as major contributors to burnout are compared with the findings of the regression analysis. For instance, work load was the key contributor to feelings of Emotional Exhaustion burnout as identified by administrators, while Overall Work Stress and Satisfaction with Work Load were the significant predictors of this subscale. The fact that both quantitative and qualitative data are consistent in identifying the etiology of Emotional Exhaustion burnout (as well as the etiologies of the other subscales) provides evidence in support of triangulated research methodologies and their enrichment of research findings. The relationships among work load, stress, and burnout revealed in this study are similar to the findings of Blase (1986), Cedoline (1982), and Gmelch and Swent (1984).

Work load and lack of sufficient time to complete tasks are related. Blase (1986) suggested that "time may be one of the most important and neglected variables in understanding stress" (p. 23), and that it "cannot be understood as independent of other sources of stress" (p. 28). Administrators indicated that both an increased work load and insufficient time contributed to each form of burnout. These findings fit the pattern of "burned-out" administrators described by Welch et al. (1982): "Faced with too much to do, with declining resources and decaying autonomy, the satisfactions associated with being a principal are being eroded . . . the result—burned-out principals" (p. 45).

The findings also indicate that Maslach and Jackson's (1981a, 1981b) conceptualization of burnout is related to the transactional concept of stress as developed by a number of researchers. From the transactional perspective, McGrath (1976, p. 1352) defined stress as the result of a situation presenting a demand which is perceived as exceeding the person's capabilities for meeting that demand. In this study, administrators felt the constant shortage of time was stressful. Their failure to alleviate this stressful response contributed to burnout. Many administrators identified interpersonal relationships as a major contributor to negative attitudes and impersonal responses associated with Depersonalization burnout. Other work factors associated with this type of burnout were the unfavorable attitudes of parents and various publics, time constraints, and excessive demands. These qualitative data are consistent with the major predictors of Depersonalization burnout (i.e., Satisfaction with Status and Recognition, Overall Work Stress, Satisfaction with Work Load). The school administrator's role as an intermediary between the collective interests of the school and the individual concerns of teachers, students, and parents places him or her in stressful situations. These stressful situations, Maslach (1982) claimed, contribute to burnout because "they are another source of emotional stress that adds to the development of emotional exhaustion and negative feelings about people" (p. 42).

Administrators claimed that negative feedback was the main contributor to Personal Accomplishment burnout. Pines, Aronson, and Kafry (1981, p. 118) recognized that feedback in the form of rewards and significance is a potential buffer against burnout. In the case of this study, insufficient or negative feedback was related to Personal Accomplishment burnout. The other work features identified by administrators as leading to Personal Accomplishment burnout—that is, interpersonal relationships and the perceived pressures from higher authorities—were similar to the predictors of this subscale (i.e., Satisfaction with Interpersonal Relationships, Security and Involvement, Advancement, and Autonomy). Administrators experienced Personal Accomplishment burnout as a result of the belief that the system was thwarting their opportunities for advancement and participation. This finding

supports Maslach's (1982) assertion that failure of the job to fulfill the needs of autonomy and control makes people feel "helpless, powerless, and trapped . . . [and] the betting is that they will burn out" (p. 66).

The qualitatively derived data, though supportive of the findings of the quantitative analysis, were, however, not entirely in agreement with them. For one thing, they did not separate out the perceived sources of each dimension of burnout. For example, satisfaction with interpersonal relationships entered as a predictor of only one dimension of burnout in the regression analysis. In the open-ended responses, interpersonal relationships were related to all three burnout dimensions. Second, in the qualitative analysis, all three forms of burnout were linked, to a degree at least, to practically every work condition identified. Such discrepancies raise serious issues about the nature of burnout and the measurement of sources of burnout among administrators. It should be noted that the regression analysis reveals only statistically significant information, and that the much-needed qualitative approaches to the study of burnout could contribute additional understandings. Regardless, the findings of the study reported in this paper are useful and revealing. However, in view of the discrepancies between the two methods and the limitations imposed by the research design, they should be used primarily to assist in the further development of research questions and research designs.

Concluding Note

Generally, the findings of this study are gratifying. School-based administrators appeared to be coping quite well with the rigors of their jobs, and reported only moderate to low levels of Emotional Exhaustion and Depersonalization burnout in the majority of cases. A major cause of concern in over a third of all administrators, however, was that they experienced a higher than normal level of Personal Accomplishment burnout. The indications from this study are that this type of burnout is most closely associated with the failure of the job to provide positive feedback and to fulfill adequately the needs of status, recognition, and satisfying interpersonal relationships. Further, these findings tend to support those of Brookings, Bolton, Brown, and McEvoy (1985) who noted that "personal accomplishment is largely independent of emotional exhaustion and depersonalization" (p. 149). Research may explore whether increased positive feedback as well as training in human relations skills would reduce Personal Accomplishment burnout among school administrators. The findings of this research also indicate that these strategies may assist in buffering the onset of Depersonalization burnout. Future research could examine the extent to which the motivational needs of administrators are critical determinants of burnout and concentrate less on the impact of job-specific factors as contributing to administrator burnout.

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Cognitive Level of Student Teachers and their Perceptions of Cooperating Teachers

Relationships were examined between student teachers' levels of cognitive development and their (a) perceptions of their relationships with cooperating teachers; (b) evaluations of cooperating teachers as supervisors; and (c) cooperating teachers' evaluations of the student teachers. At the beginning of a semester, 51 student teachers completed objective tests measuring the four stages of cognitive development defined by Conceptual Systems Theory, and scales measuring dispositional (personality) stress. At the end of the semester, subjects completed the Barrett-Lennard Relationship Inventory and a scale evaluating their cooperating teacher. At the end of the semester, cooperating teachers also evaluated the student teachers. Student teachers gave highest ratings to cooperating teachers whom they perceived as empathetic and friendly. Student teachers who appeared to be concrete (rather than abstract) thinkers tended to be most satisfied with their cooperating teachers. In turn, cooperating teachers assigned highest ratings to student teachers who appeared to be non-achievement oriented, and who were comfortable with rigid patterns of behavior. Results are interpreted to reflect a preference for "facilitative" rather than for "deliberative" supervision during student teaching.

The purpose of this study was to examine the significance of cognitive level, as defined by Harvey, Hunt, and Schroder's (1961) Conceptual Systems Theory, to one aspect of student teachers' field experiences. How does the cognitive level of student teachers affect their perceptions and evaluations of their cooperating teachers? Is the cognitive level of student teachers significantly related to cooperating teachers' evaluations of the student teachers' competencies? Underlying these questions was the assumption that cognitive level affects the way individuals perceive, organize, and evaluate information, including information about others. Because perception has an evaluative component, it may indirectly affect the way relationships between individuals are perceived.

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Conceptual Systems Theory (CST) defines cognitive development in terms of an increased ability to think abstractly, as well as specific changes in personality and perception. According to CST, as individuals progress from simple (concrete) thinking to complex (abstract) thinking, they also move from one specific set of beliefs to another.

According to the CST model, there are four developmental stages, or conceptual systems, each associated with characteristic beliefs. Individuals representing System 1 tend to be extremely rigid, absolute in their judgments, and in need of structure. This first stage is also associated with a compulsive concern with religion and a reliance on authority. Individuals representing System 2 tend to be rebellious, to reject social convention, and to have an unusually pervasive distrust of people. Prototypes of System 3 are concerned with affect: the feelings of others, friendship, and social acceptance. They also tend to feel special and to have a strong internal locus of control. Finally, representatives of System 4 can be described by relativism, flexibility, low evaluativeness, and the tendency to use multiple perspectives in perceiving information. Individuals at this last stage tend to rely on internal standards and a sense of personal competence, and to be concerned with balance and equity in social interactions.

Level of cognitive development, as defined above, has been related to ways of processing information. Studies have shown that subjects at abstract levels tended to differentiate, to encode, and to infer from information to a greater degree than subjects at concrete levels (Sieber & Lanzetta, 1966). In experiments where subjects were presented with contradictory pieces of information about hypothetical individuals, concrete subjects reacted more negatively toward the contradictions and tended to use a single process for resolving them (Crano & Schroder, 1967). Subjects functioning at lower, more concrete developmental levels also tended to be more evaluative and dogmatic in their attitudes than their abstract counterparts (Harvey & Ware, 1967). One's level of cognitive development, as defined by CST, appears to describe a great deal more than simply the ability to think abstractly. In a very literal sense, it may affect the way one perceives and evaluates people and behaviors and the way one is likely to resolve conflict and contradiction.

CST appears to have special relevance for the field of education, because a growing body of empirical research has related some of its dimensions to the behaviors and effectiveness of teachers at all levels of education. The cognitive variable most frequently examined in these studies has been the tendency (of teachers) to be concrete or abstract in their thinking. Scores obtained on a projective test of this dimension have been used to dichotomize teachers as concrete versus abstract thinkers. In general, abstract teachers have been found to be more flexible, to encourage more student involvement, to have a greater diversity of activities in their classes, and to have a greater tolerance for stress than concrete teachers (e.g., Harvey, White, Prather, Alter, & Hoffmeister, 1966; Hunt & Joyce, 1967; Miller, 1978).

The relevance of cognitive level, as defined by CST, to the student teaching experience can be inferred from recent studies by Tardif (1985) and Campbell (1985). Tardif's in-depth study of student teachers' attitudes and thoughts through three semesters of teaching revealed basic "perspectives," or themes, common to the entire student teaching experience. Cognitive level, as a construct, is clearly related to two of these themes: Seeing Oneself as a Teacher, and Taking the Path of Least Resistance. To See Oneself as a Teacher involves the ability of student teachers to perceive their cooperating teachers' point of view. The ability to assume another's perspective has been theoretically and empirically related to higher levels of cognitive development (Harvey, et al., 1961; Harvey & Ware, 1967; Sieber & Lanzetta, 1966). Taking the Path

of Least Resistance refers to student teachers' attempts to avoid conflict with cooperating teachers. The perception of inconsistency and conflict—that is, whether one labels a situation as such, and how negatively one may respond to it—has also been empirically related to cognitive level (Crano & Schroder, 1967). Thus one can logically assume that student teachers' cognitive level (as defined by CST) would indirectly affect how they evaluate themselves and how they perceive their cooperating teachers.

Campbell (1985) examined factors that influenced student teachers' actual classroom behavior. Self-report data indicated that the one factor given priority in all phases of teaching was "student teachers' ideas, beliefs, and characteristics." If one considers the attitudes associated with each level of cognitive development in CST as being pervasive characteristics, then the relevance of CST to the student teaching experience is clear—the ideas, beliefs, and perceptions related to each cognitive level play a key role in determining the actual classroom behaviors of student teachers. These behaviors, in turn, are likely to influence the attitudes and behaviors of cooperating teachers. Thus the quality of the interpersonal relationships that exist between student teachers and cooperating teachers is indirectly affected by student teachers' cognitive levels.

The Barrett-Lennard Relationship Inventory (Barrett-Lennard, 1962) is a self-report measure designed to assess four elements that Rogers (1962) described as necessary for any effective helping relationship: (a) Congruence: the perception that the other person is genuine and without facade; (b) Empathy: the feeling that the other person is experiencing an accurate and sensitive awareness of you; (c) Positive Regard: the feeling that the other person is warm, accepting, and cares for you; (d) Unconditioned Regard: the perception that acceptance is total rather than conditional.

Though the Barrett-Lennard Inventory was developed to assess the relationship between a client and a therapist, it has been used extensively in educational contexts. Several researchers have found significant positive correlations between students' responses on the Barrett-Lennard and their academic gains, as well as the amount they communicated with their teachers (Emmerling, 1961; Lewis, Lovell, & Jesse, 1965). Indeed, theorists have claimed that learning cannot occur unless pupils perceive that an effective helping relationship exists with their teacher (Bush, 1959; Rogers, 1962; Wingo, 1960). If pupils learn most effectively and communicate more in the framework of a good relationship, one can assume the same would be true of student teachers who are, in a sense, pupils of their cooperating teachers. The present study represents a unique attempt to use the Barrett-Lennard Inventory together with measures of cognitive level to examine the student teacher-cooperating teacher dyad.

Method

Subjects were 51 student teachers in the Department of Teacher Education at the University of Nebraska at Omaha. Thirty-three percent were in their first semester of student teaching, the remaining in their second semester. Males represented 22% of the sample, females 78%. The mean age was 29.5 years ($SD=8.5$ years). Fifty-nine percent of the subjects were teaching at the elementary level, 41% at the secondary level. The cooperating teachers ($N=51$) working with the student teachers were experienced teachers who had previously hosted student teachers.

Instruments

Cognitive level. The cognitive level of student teachers was assessed with several scales from the Belief Systems Test, the most recent and experimental set of objective, Likert-type scales developed by Harvey and his colleagues (Gore, 1985; Harvey & Gore, 1979; Harvey & Hoffmeister, 1971). Cognitive level has traditionally been measured by a projective, paragraph-completion task which required trained raters to assign a respondent to one conceptual system on the basis of an overall, subjective impression of the paragraph. Items in each subscale of the experimental Belief Systems Test were selected on the basis of both their internal consistency and their ability to discriminate prototypes of the four conceptual systems. Eleven scales from the inventory were selected for use here, because they were shown to be most significant in discriminating subjects in each of the four conceptual systems (Gore, 1985). It should be noted that the discriminant power of these subscales was demonstrated with a sample of prototypical (pure) representatives only. Subjects representing admixtures of the four systems were not used in the analysis. In addition, though the 11 subscales were instrumental in correctly classifying 74% of all prototypical subjects, accuracy rates varied per system: that is, the highest accuracy rate obtained for the lowest system, the least accurate results obtained for the highest system. Coefficient alpha for the set of scales ranged from .61 to .96; and scores on each subscale were shown to correlate significantly with results of the subjective, paragraph-completion task used to assess cognitive level (Gore, 1985).

The 11 subscales and the conceptual systems with which they are associated are described below, along with sample items. Five alternative responses were provided for each item, ranging from disagree strongly to agree strongly. *System 1 scales: Effectance Via God:* "I believe I will succeed in life if I closely follow God's teachings." *Centrality: God:* "The greatest loss I could suffer would be my relationship with God." It should be noted that it is not the belief in God that is associated with System 1, but the tendency to attribute all success and failure to an external power. *Scales associated with System 2: Distrust of People:* "These days a person doesn't really know whom he/she can count on." *Depression:* "I generally hate to face a new day." *Distrust of Authority:* "Most people in authority and power have gotten there through lying and taking advantage of weaker people." *System 3 scales: Sympathy:* "I like my friends to confide in me and to tell me their troubles." *Personal Effort and Will:* "I can do anything I want to if I really make up my mind to do so." *Acceptance of Obligation* (scoring of items is reversed): "I hate to accept a favor because it makes me feel obligated." *System 4 scales: Rejection of Polarity* (scoring is reversed): "All people may be classified as good or evil." *Constancy of Change:* "There is nothing in the universe which is not in the process of constant change." *Rejection of Regular Schedule* (scoring reversed): "I like to have my meals organized and a definite time set aside for eating" (Gore, 1985).

Scores obtained by subjects on each of these subscales were treated as continuous variables, that is, scales were not used to dichotomize or classify subjects according to any one conceptual system. This procedure was chosen on the assumption that most individuals are not prototypical representatives of only one developmental stage, but instead probably represent admixtures of several levels (Gore, 1985; Harvey & Gore, 1979; Santmire, 1984).

Relationship with cooperating teacher. Student teachers' perceptions of their relationships with their cooperating teacher were assessed with subscales from the Barrett-Lennard Relationship Inventory, which together appear to assess the overall quality of an interrelationship: Level of Regard, Congruence, and Empathy (Lanning

& Lemons, 1974). Scores on these subscales described how student teachers perceived their cooperating teachers had responded to them during the course of one semester of student teaching. Alpha has been reported above .79 for these scales.

Evaluation of cooperating teachers. Student teachers' evaluations of their cooperating teachers were measured with a questionnaire designed for this study. The items were based on teachers' descriptions of the behaviors of consultants who worked with them in solving classroom problems (Hansen, Himes, Dowd, & Sartore, 1977). In essence, cooperating teachers function as teacher-consultants, assisting student teachers to diagnose and resolve classroom problems. According to 140 critical incidents described by the teachers in the Hansen et al. study, consultants performed five basic functions: listening, questioning, instructing, observing, and structuring. Consequently, eight items were developed which asked the respondents (student teachers) to rate the ability of their cooperating teachers to: listen carefully to them; ask them meaningful questions; teach them skills, attitudes, or behaviors; observe their teaching and provide feedback; structure lessons or learning experiences for them; suggest alternative ways to solve problems; correctly judge the amount of independence they should have; and finally, ability to portray a good role model of a teacher. A five-point Likert scale was provided, ranging from poor to excellent.

Student teachers' competency. The competency of student teachers was evaluated by their cooperating teachers using a 34-item Likert scale routinely used in the Department of Teacher Education at the University of Nebraska at Omaha. Items asked cooperating teachers to rate a student teacher's ability to teach, maintain discipline and rapport with students, as well as the ability to establish a professional demeanor. A five-point Likert scale ranged from poor to excellent.

Stress. Because how one perceives stress has been positively related to cognitive level (Oswald, 1971), it was decided to evaluate student teachers' inherent levels of stress with the Dispositional Stress scales, developed and used by the author in prior studies (Albertson & Kagan, in press; Kagan & Albertson, in press). The inventory consists of five scales designed to assess personality traits that tend to induce or to amplify stress across a variety of situations. Five separate subscores are yielded: Overload (a pervasive sense that too much is expected of one), Lack of Self-confidence, Time Urgency, Need to Keep Busy (the tendency to be stressed by a lack of stimulation), and Anxiety. Alpha was reported as ranging between .73 and .88 for the set of scales. Scores obtained by teachers on these scales were shown to be strongly related to their perceptions of occupational stress, stresses inherent in the teaching profession (Albertson & Kagan, in press). It was felt they were likely to be relevant to the perceptions and experiences of student teachers as well.

Procedure

Student teachers completed the tests of cognitive level and dispositional stress at the beginning of the semester. At the end of the semester, they completed the Barrett-Lennard scales and the evaluation of their cooperating teacher. Cooperating teachers' evaluations of the student teachers were also completed at the end of the semester. Though student teachers and cooperating teachers were providing evaluations of each other, they understood that they were assigned special identification numbers to assure the confidentiality of their responses. In fact, names never appeared on the questionnaires, only the identification numbers. All questionnaires were distributed and returned by mail.

Data Analysis

Items on each subscale were summed for each subject. Responses to items on the questionnaire evaluating a cooperating teacher were summed to yield a single global rating. A similar procedure was followed for the questionnaire completed by cooperating teachers to evaluate the student teachers.

Interrelationships among all variables were assessed via Pearson Product-Moment correlation coefficients. In addition, nine separate multiple regression analyses were conducted, predicting the score on each item on the questionnaire used to evaluate the cooperating teacher, then predicting the global score on the entire questionnaire. Predictors in each regression equation were: scores obtained by student teachers on measures of cognitive level, dispositional stress, and the relationship scales.

Results

Each of the subscales of the Relationship Inventory was strongly related to student teachers' global assessments of their cooperating teachers (Table 1). The Relationship Inventory was also positively correlated with System 1 scales, representing the lowest conceptual level (r ranged from .25 to .29), and negatively correlated with System 4 scales, measures of the highest conceptual level (r ranged from $-.26$ to $-.40$). In other words, student teachers at higher cognitive levels tended to perceive their relationships with cooperating teachers in less positive terms. Because higher conceptual level has been related to an articulated and complex style of information processing (Sieber & Lanzetta, 1966), student teachers at higher levels may have perceived their cooperating teachers more critically or in more complex terms.

Cooperating teachers' evaluations of their student teachers were unrelated to any part of the Relationship Inventory, but they were negatively related to one of the System 4 scales: Rejection of a Regular Schedule ($r = -.36$). Cooperating teachers may have associated the predictability and conventionality of a student teacher's behavior with professionalism. Thus student teachers who tended to adhere to fixed and predictable patterns of behavior obtained higher evaluations.

Bivariate correlation coefficients between measures of stress and teacher ratings (not shown) were not significant, except for a significant correlation between student teachers' scores on the Need to Keep Busy scale and the global rating assigned by their cooperating teachers: $r = -.47$. One could infer that the less achievement-oriented (less active) student teachers were, the more cooperating teachers seemed to approve of them. This was consistent with cooperating teachers' approval of consistency and fixed patterns of behavior among student teachers.

When separate regression equations were constructed predicting each item on the rating scale used by student teachers to evaluate cooperating teachers, results were surprisingly consistent (Table 2). In every case, nearly the entire amount of accountable variance was contributed by one of the subscales of the Relationship Inventory, particularly Empathy or Regard. Multiple R^2 ranged from .35 to .89, indicating that on some items student teachers' evaluations of their cooperating teachers could be predicted almost entirely from their responses to the Relationship Inventory.

Discussion

If one distinguishes between cognitive predictors (scores obtained by student teachers on the CST measures of cognitive level) and affective predictors (scores on the Relationship Inventory), then student teachers appeared to define the competency and effectiveness of cooperating teachers primarily in affective terms. They gave highest

TABLE 1
Intercorrelations Among Teacher Ratings,
Relationship Scales, and Measures of Cognitive Level

	Student teachers' global rating of their cooperating teacher	Cooperating teachers' global rating of their student teacher	<i>Relationship Inventory</i>		
			Level of Regard	Empathy	Congruence
<i>Relationship Inventory</i>					
Level of Regard	.67**	.16			
Empathy	.76**	-.03	.82**		
Congruence	.59**	-.07	.76**	.80**	
<i>Measures of Cognitive Level:</i>					
System 4:					
Rejection of Polarity	-.18	.03	-.40**	-.23	-.26*
Constancy of Change	-.10	-.22	.07	.12	.21
Rejection of Regular Schedule	-.10	-.36**	-.30*	-.12	-.17
System 3:					
Sympathy	.07	-.23	-.13	.02	.05
Personal Effort and Will	.12	-.16	.00	.00	.09
Acceptance of Social Obligation	.00	.14	.03	-.07	-.05
System 2:					
Distrust of People	-.19	-.28*	-.23	-.11	-.14
Distrust of Authority	-.04	-.22	-.08	.02	.03
Depression	-.16	-.12	-.20	-.10	.14
System 1:					
Effectance via God	.12	.11	.29*	.17	.25*
Centrality: God	-.12	.08	.25*	.12	.21

* $p < .05$
** $p < .01$

ratings to cooperating teachers whom they perceived to be empathetic and warm. Student teachers appeared to value cooperating teachers who were friendly, liked them, and understood their problems. How helpful cooperating teachers were in an objective, substantive sense may have been relatively unimportant to student teachers. An even more disturbing inference emerged when it was recalled that scores on the Relationship Inventory were negatively related to student teachers' conceptual level, that is, the aspects of their relationships with cooperating teachers that were most highly valued by student teachers (Empathy, Regard) were also those associated with the lowest conceptual levels among student teachers. This indirectly suggested that the student teaching experience may have been perceived most positively by student teachers who represented the lowest level of cognitive development (as defined by CST).

Findings can be easily related to the model of supervisory behavior suggested by Boldt and Housego (1986) and Housego and Grimmatt (1983), which distinguishes between "facilitative" and "deliberative" supervisors. Facilitative supervisors attach greatest priority to the threats student teachers perceive in class experiences. Accordingly, these supervisors function primarily as kind, considerate, assuring counselors. "Deliberate" supervisors are knowledge-based, oriented toward discussing alternative strategies for dealing with classroom problems. Though this model was based on the behaviors of university supervisors, it could logically be extended to cooperating teachers, who also serve in a supervisory capacity.

TABLE 2
Multiple Regression Analyses
(N = 51)

Dependent Variable	R	Predictor	R ²	Beta Weight
Student teachers' global rating of cooperating teacher	.84	Empathy	.70	.834
Cooperating teachers' global rating of student teacher	.54	Need to keep busy (stress)	.30	-.548
<i>Individual items on which student teachers evaluated cooperating teachers:</i>				
Cooperating teacher's ability to . . .				
Listen carefully to your comments and problems		Congruence	.74	.325
		Empathy	.79	.630
		Rejection of Polarity (System 4)	.85	.238
	.94	Distrust of Authority (System 2)	.89	.194
Ask you meaningful questions about your feelings, lessons, beliefs, etc.	.78	Regard	.59	.780
Teach you skills, attitudes, or behaviors		Regard	.55	.845
	.80	Anxiety (stress)	.64	-.305
Observe your teaching and provide feedback		Empathy	.46	.733
	.76	Anxiety (stress)	.58	-.347
Structure lessons or learning experiences for you	.77	Regard	.61	.77
Suggest alternative ways to solve some teaching-related problems you had		Empathy	.35	.572
		Anxiety (stress)	.51	-.359
	.78	Effectance via God (System 1)	.61	.333
Correctly judge the amount of freedom and independence you should have had in planning and teaching	.64	Empathy	.41	.643
To portray a good role model of a teacher		Empathy	.72	.893
		Need to Keep Busy (stress)	.85	-.379
	.94	Centrality: God (System 1)	.89	-.201

It could be inferred that the student teachers surveyed in the present study preferred cooperating teachers who were facilitative and supervision that was (in Boldt and Housego's terms) "indulgent" and "impoverished." More provocatively, results also suggested that student teachers' preferences in terms of supervisory style may

depend in part on their levels of cognitive development, more concrete-thinking student teachers preferring facilitative supervisors. Overall, student teachers in the present study assigned higher ratings to cooperating teachers whom they perceived as facilitative. Did these cooperating teachers, in fact, function as facilitative supervisors? How accurate were student teachers' perceptions of their cooperating teachers' performance and attitudes?

One might cite the lack of significant correlations between cooperating teachers' evaluations of student teachers and student teachers' perceptions of the interpersonal relationships as evidence that student teachers misinterpreted the feelings of their cooperating teachers. In this regard, results forecast a series of future studies examining the mutual perceptions of student teachers and cooperating teachers. Is accuracy of perception associated with student teachers' levels of cognitive development? Results also forecast a series of "matching" studies in which dyads of cooperating teachers and student teachers matched for cognitive level might be compared with mismatched dyads. Do dyads matched for cognitive level perceive one another more accurately or regard one another more positively than do mismatched dyads? Handley (1982) found this was partially true for counselors and trainees matched for cognitive style, as measured by the Myers-Briggs scales.

It might also prove useful to pursue inferences of another finding presented here: Cooperating teachers assigned higher ratings to student teachers who, in part, resembled prototypes of System 1, the lowest conceptual level. This suggests that cooperating teachers approved most of student teachers who represented the most concrete, simplistic thinkers. Cooperating teachers also assigned higher ratings to student teachers who obtained relatively low scores on the Need to Keep Busy (stress) scale. Items on this scale assess the tendency to be type-A: ambitious and achievement oriented. Assuming results are generalizable to populations beyond this study, in what other ways might we be discouraging achievement-orientation and superior cognitive performance among preservice teachers? Would university supervisors' evaluations of student teachers be similar to those of cooperating teachers in rewarding student teachers at the lowest conceptual levels?

The conceptual level at which student teachers and their cooperating teachers function is an issue hitherto ignored in empirical literature. Conceptual Systems Theory represents but one of the developmental models of cognitive development that might be applied to teacher training. Considering the pervasive influence one's level of cognitive development most likely has in terms of how one perceives and evaluates situations and people, it seems a crucial variable to examine. We have long acknowledged in other content areas that the differential aptitudes of students demand differential kinds of instruction. It is reasonable to assume the same would be true of teacher training.

Limitations

Inferences should be regarded as hypothetical and tentative in light of several limitations inherent in this study. First, cognitive level must be understood strictly within the definition of Conceptual Systems Theory. The Likert-type subscales used to measure conceptual level are still experimental in nature. To what degree the scales assess something more than attitude or personality—that is, level of cognitive development—may constitute a debatable issue. In addition, data were correlational in nature, and thus cannot be construed as evidence of direct or causal relationships between variables.

We were unable to statistically compare correlation matrices for first versus second semester student teachers, or for male versus females, due to the ratio of subjects within these subgroups to the number of variables. Thus the conclusions drawn here may not be generalizable across all these subgroups. It would be interesting, for example, to compare student teachers completing their first versus their second semester of student teaching. Do student teachers in both groups prefer facilitative rather than deliberative cooperating teachers? O'Neill (1985) presented evidence strongly suggesting that results obtained for a sample of female student teachers are likely to be significantly different from those obtained from male student teachers. O'Neill cited two reasons to expect gender-based differences. First, supervisors tend to devalue the performance of same-sex student teachers. Second, the perceptions of female student teachers are more likely to be consistent with the ways cooperating teachers actually evaluate them, because females are more socialized to feedback. Female student teachers would be more sensitive and responsive to evaluative feedback from cooperating teachers, so feedback would be more likely to affect behavior.

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Assessments by Teachers of their Preservice Preparation Programs

Graduates of Alberta teacher education programs were surveyed to determine the extent to which their preservice preparation provided them with the knowledge and skills required for effective teaching. Teachers viewed programs as having more potential to develop knowledge and understandings than skills. Preparation programs were rated as most effective in the areas in which teachers considered them to have the highest potential; however, these areas were not highly important to teachers in their daily work. Practicums were judged to be the most significant component of teacher preparation. The significance attached to other education components was related directly to the degree to which they were judged to be practical. Results of the study raise, once again, issues related to the general orientation of preservice teacher education programs.

Research which attempts to strengthen the knowledge base for teacher education takes a variety of different forms. Some studies focus on selected components of preservice preparation or on the experiences of particular individuals while others attempt global assessments of programs. The project on which this report is based falls into the latter category. More specifically, an evaluative study of teacher preparation programs in Alberta was carried out using a follow-up approach.¹ Although the research relates to a specific context, both the method and the results may be of more general interest.²

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Problem and Purpose

The major problem addressed by the study was the limited amount of current information available to decision makers about the strengths and shortcomings of teacher preparation programs offered by Alberta universities. In view of this consideration, a project was designed to address the following question: To what extent do preservice preparation programs provide teachers with the knowledge and skills which are important for effective teaching? Although answers to the question could be sought in various ways, teachers who had graduated recently from programs were assumed to be a valid source of information.

A number of more specific questions served as guides to the development of the study:

1. How important are selected knowledge, skills, and understandings to teachers in their current positions?
2. What potential do teachers see for preservice programs to develop those knowledge, skills and understandings?
3. How effective are preservice preparation programs in helping teachers to acquire the requisite knowledge and to develop important skills?
4. What suggestions do teachers have for improving preservice preparation programs?

Within the context of these questions, attention was directed also to the contributions made by different components of preservice programs to teacher preparation as well as to variations in perceptions of teachers who had pursued different routes. The major method of data collection was a questionnaire survey supplemented by interviews.

Background

In spite of the research which has been conducted, efforts to improve teacher education programs have been hampered by insufficient information about the adequacy of existing practices. A review of studies that could be classed as evaluations of teacher preparation programs revealed that not much has been reported in this area (Hawryluk & Greene, 1986). Few Canadian universities have initiated comprehensive, longitudinal, planned evaluations grounded in a conceptual model of what preservice programs attempt to accomplish or what contribution they make to the development of particular knowledge and skills. However, there have been numerous studies of programs which are specific to particular geographic areas or institutions (Greene, 1979; Haines & Robertson, 1985; McCutcheon, 1979; Ratsoy, McEwen & Caldwell, 1979; Rieger & Woods, 1971; Rieger, 1974). Predominant among these are follow-up studies of graduates. Such studies have been criticized for their conceptual and methodological inadequacies, for the lack of representative sampling, for the limited use to which the results are put by the institutions which sponsor them, and for their problematic generalizability (Katz, Rath, Mohanty, Kurachi, & Irving, 1981). Although these limitations cannot be denied, research of this nature does have potential value.

Studies which have been conducted in Canada indicate that some preservice programs tend to have a strong academic orientation (Ratsoy, McEwen & Caldwell, 1979). With respect to particular components, the practicum consistently emerges as the experience which is regarded as most valuable by teachers (Wideen & Holborn, 1986). Of the other contributions made by the faculty of education, curriculum and instruction courses are generally assessed more favorably than are courses in others

areas (Rieger & Woods, 1971). Programs have been criticized by graduates for an insufficient emphasis on skill development in areas such as classroom management, communication, diagnosing learning difficulties, and specific curriculum development and implementation skills (Haines & Robertson, 1985; Rieger, 1974). More major concerns relate to the general fragmentation of the program and to the gap between theory and practice (Ratsoy, McEwen & Caldwell, 1979; Wideen & Holborn, 1986).

In order to be useful for decision making, results of such studies must be validated for specific programs. Validations are also replications which may contribute to the development of general knowledge about teacher education. For those reasons, follow-up studies seem to have a legitimate place in research on teacher education.

Method

Because one of the objectives was to ground the study of preservice programs in research on teacher effectiveness, the relevant literature was reviewed in the search for potential questionnaire items (see Hawryluk, 1986). An additional thrust was to review goals of teacher education programs in order to identify items that appeared to have potential for assessing preservice programs (see Hawryluk & Greene, 1986). Particular attention was given to relevant documents—goal statements, program and course descriptions—of Alberta teacher education programs to identify explicit or implicit objectives. Questionnaires which had been used in similar studies—both in general follow-up studies and in program evaluations—were also reviewed.

The preliminary work indicated a need for a conceptual framework which would provide the basis for developing a sufficient number of valid items. Through discussions of the results of the literature review with a number of teacher educators, a categorization of nine teacher roles—for which Lanier (1984) served as a point of departure—was developed. The conceptualization identified nine clusters of activities or teacher roles. More specifically, teachers were viewed as effective persons, as skilled practitioners, as decision makers, as creators of learning environments, as participants in establishing human relationships, as learners, as specialists in the content and process of learning, as participants in curricular and educational change, and as professional educators.

A number of teacher educators used the categorization of roles to develop knowledge, skill and understanding items and critiqued each other's suggestions in several sessions. Eventually, more than 60 potential items were identified. Selection of items for inclusion in the questionnaire was based on the dual criteria of the appropriateness rating by a sample of teacher educators and representativeness across the nine categories of teacher roles. Through this process, 40 items were tentatively selected and reduced to 30 after a series of pilot tests of draft questionnaires.³

Design of the Questionnaire

The final form of the questionnaire consisted of six parts as described below:

- Part A. Potential Contribution of Preservice Preparation—30 items with one response for each. The response scale ranged from P where preservice preparation is the main contributor to E where experience is the major contributor through three combinations of preparation and experience.
- Part B. Effectiveness of Preparation Programs—30 items with two responses (importance and effectiveness) for each. On importance the scale ranged from 5 (High Importance) to 1 (Low Importance). The program effectiveness scale ranged from 5 (High Effectiveness) to 1 (Low Effectiveness).

Part C. Components of Preservice Preparation—seven questions with a rating scale and space for comments. Seven components were defined which reflected groups or clusters of courses in each of the programs: courses taken outside of the Faculty of Education; curriculum and instruction courses; courses in educational psychology; courses in history, philosophy, or sociology of education; courses in the organization and administration of education; practicum experiences; and general interest courses. A scale ranging from 7 (Highly Significant) to 1 (Of Limited Significance) was used. Space was provided in the questionnaire for comments on each component.

Part D. Strengths and Shortcomings of Preparation Programs—three open-ended questions on the strengths, shortcomings, and desired changes in preservice preparation programs were also included.

Part E. Background Information—11 questions with varying response categories relating to preparation program characteristics and information on the respondent's current teaching assignment which was intended for use in describing the sample and analyzing the data.

In Part F respondents were asked if they would be willing to participate in an in-person interview. A separate response form was enclosed.

Data Collection Procedures

The purposes of the study called for the selection of a sample from among teachers who were graduates of Alberta teacher preparation programs and who were in their first, third, or fifth year of teaching. Access to the population was through the records of certificated teaching personnel in Alberta maintained by the Department of Education. In an effort to obtain as large a sample as possible, a decision was made to survey all first-year teachers and to sample equal numbers of teachers in their third and fifth years of teaching.

The packet which was mailed to 1292 teachers in February 1986, included the following items: a covering letter, a copy of the questionnaire, a form on which teachers could indicate a willingness to participate in an interview, and a postage-paid return envelope. A follow-up letter was sent about two weeks later. In total 523 completed questionnaires were received of which 515 were used in the analysis. A summary of the return rate by year of teaching is shown in Table 1.

As is indicated in the table, the overall response rate was about 40%. The percentage of responses for teachers in their fifth year of teaching was higher than that for teachers in their first or third year. However, the responses of first-year teachers represented a higher percentage of the population than did third- or fifth-year teachers. Any generalizations from the results will clearly be biased in the direction of the responses of first-year teachers. Furthermore, because the majority of the responses were from graduates of the University of Alberta Faculty of Education, the results of the analysis reflect responses relevant to that particular institution to a disproportionate degree.

In total, 224 respondents completed the form on which they indicated a willingness to participate in interviews. The research plans called for a maximum of 45 interviews; 42 teachers were actually interviewed during the months of May and June 1986. The interviews were conducted with teachers individually, either at the school, at their homes, or in an office setting. Duration of the interviews varied but tended to be about one hour. Although a number of interviewers were involved, a common guide was used.

TABLE 1
Distribution of Population, Sample and Respondents
by Number of Years of Teaching Experience

Year of Teaching	Number in Population	Number in Sample	Number Returned	Percent Return	Percent of Population
First	560	552	213	38.6	38.0
Third	595	370	141	38.1	23.7
Fifth	855	370	169	45.7	19.8
Total	2010	1292	523	40.5	26.0

Data Analysis

All questionnaire data, including the responses to open-ended questions, were entered into a computer file. The primary mode of analysis of quantitative data was to compute frequencies, percentages, and means. Statistical tests were applied to establish whether differences or contingencies merited discussion; however, the outcomes of the tests were regarded mainly as guides rather than as a definitive basis for interpreting the results of the survey.

An intensive content analysis of responses to open ended questions was carried out. Some of the results of this aspect of the study have been reported by Greene and Miklos (in press). Interviews were also subjected to appropriate analysis, and a comprehensive summary of 15 of the interviews was prepared by Chapman (1986).

Results

The results of the data analysis are reported primarily in relation to the 30 knowledge/skills/understandings items included in the questionnaire. The analysis revealed the extent to which various items were important to teachers, the extent to which teachers considered preservice programs to have potential for developing requisite knowledge/skills/understandings, and the effectiveness of programs in preparing teachers in those areas. In addition, the contributions made by various components as well as the strengths and shortcomings of programs were revealed both by the questionnaire and the interview data.

Importance

In analyzing the data on importance of selected knowledge, skills, and understandings, the five response categories were collapsed into three: very high importance, high importance, and moderate importance. All the specific items included in the questionnaire were at least of moderate importance to teachers with most of them approximating high importance. Consequently, the knowledge and skills identified can be regarded as common to a variety of teaching situations. The five highest ranking items and the five lowest ranking items are displayed in Table 2.

Rated highest in importance by teachers were skills relating directly to the operation of a classroom such as organizing for teaching, motivating, and communicating with students, and learning from experience. Of less importance, but still important, were understanding the organizational structure of the educational system, participating in the process of improving schools, and understanding social issues or legal aspects of teaching.

TABLE 2
Distribution of Responses on Knowledge, Skills, and
Understandings Rated Highest and Lowest in Importance (N=515)

Knowledge/Skill/Understanding	Importance		
	Very High	High	Moderately High
<i>High Importance Items</i>			
Organizing myself for teaching	83.9%	15.0%	1.1%
Motivating students and involving them in learning	81.3	16.7	2.0
Communicating effectively with students	80.3	18.1	1.6
Relating to students in a supportive way	67.0	27.8	5.2
Learning from my own professional experience	67.2	26.6	6.2
<i>Low Importance Items</i>			
Using community resources to support teaching and learning	22.4	39.4	38.2
Understanding social issues which have relevance for education	21.8	36.3	41.9
Understanding legal aspects of my work as a teacher	22.3	33.6	44.1
Participating in the process of improving schools	18.7	37.4	43.9
Understanding the organizational structure of the educational system	10.5	25.4	64.1

There were marginal differences between different categories of teachers in the degree of importance attached to various areas of knowledge, skills, and understandings. In general, teachers in the elementary grades attached more importance to the pedagogical aspects of teaching than did teachers who taught in secondary grades. Teachers with a secondary grade level orientation placed more emphasis on the importance of a broad general education and knowledge of subject matter. Teachers in their first year of teaching attached more importance than did teachers in their third or fifth year of teaching to learning from their professional experience, managing the routine activities of a classroom, and making a commitment to their professional growth.

Potential of Programs

Respondents also rated the 30 items in terms of the relative contribution made by preservice teacher education programs and experience to the development of the knowledge, skill, or understanding. During the data analysis, the five response categories were collapsed to three: preservice programs make a greater contribution than experience, contribution is about equal, and experience makes a greater contribution. As might be expected, responses ranged across the three categories for each item; nevertheless, there was a marked gradation from item to item in the distribution of responses. The seven items on which more than one-half of the respondents believed that preparation was a greater source of learning than experience, and the six items for which less than 10% regarded preservice preparation to be the major source of learning, are displayed in Table 3.

An examination of these items serves to indicate the general nature of the potential which teachers see for preservice preparation programs. Six of the seven highest ranking items refer directly to knowing or understanding something: subject areas, ethical and legal standards, general knowledge, how children learn, and the structure

TABLE 3
Distribution of Responses on Knowledge, Skills and Understandings to which Preparation Programs Make a Major or Limited Contribution (N=515)

Knowledge/Skill/Understanding	Source of Learning		
	P or P/E	P=E	E or E/P
<i>Major Contribution</i>			
Understanding one or more subject areas in depth	70.6%	17.3%	12.1%
Knowing the ethical standards of the teaching profession	66.8	21.5	11.7
Having a broad general education	66.2	22.1	11.7
Knowing how children develop and learn	65.6	24.5	9.9
Understanding the legal aspects of one's work as a teacher	60.2	22.3	17.5
Having an effective command of the language of instruction	57.3	22.0	20.6
Understanding the organizational structure of the educational system	52.9	25.9	21.2
<i>Limited Contribution</i>			
Helping students acquire a love of learning	8.6	31.2	60.2
Managing the routine activities of a classroom	9.9	21.5	68.6
Relating to students in a supportive way	6.8	24.4	68.8
Communicating effectively with parents	6.0	16.8	77.2
Relating effectively to other teachers	5.7	15.3	79.0
Learning from one's own professional experience	3.2	11.4	85.4

of education. Only one of the items refers to a characteristic that might be considered as more skill related. In contrast, all six items on which preparation programs are viewed as having minimal potential involve the teacher being able to do something or possessing a skill: helping students acquire a love of learning, managing routine activities, and relating to others. In these areas of being able to do something, teachers identify experience as the major source of learning. Particularly noteworthy is the limited potential which teachers attribute to teacher preparation programs for developing skill in interpersonal relationships.

A general indication of the potential which teachers see in preservice preparation may be gained by disregarding the P=E percentages and comparing the first and third columns across all 30 items. The results of this comparison indicate that preservice preparation is regarded as making the greater contribution by a higher proportion of respondents on nine items; two more are approximately equivalent. For the remaining 19 items, the greater proportion of respondents consider experience to be the main source of learning. These comparisons suggest that, in relation to the types of items included in the questionnaire, teachers see relatively limited potential for preservice programs to make a major contribution to their learning.

Program Effectiveness

Responses on program effectiveness ratings were collapsed to form high, moderate, and low categories. The proportion of respondents who rated their programs as highly effective on specific items ranged from 66.8% to less than 9.1%. Five items were rated as highly effective by more than 50% of the respondents and four items were rated low in effectiveness by more than 50% of the respondents. These items are displayed in Table 4.

An inspection of the table reveals that programs are most effective in developing a range of knowledge items—knowledge of how children learn, of ethical standards, and of subject areas. Only one item which may be more skill-related—using a variety of methods—appears in the high effectiveness cluster. The four items which programs handle least effectively in the opinions of teachers are assessing social and emotional needs of students, participating in school improvement, and relating to other teachers or to parents.

In general, preservice preparation programs were viewed as highly effective on relatively few items of knowledge, skills, and understandings. Although there was a range across areas and across responses, the ratings suggest that programs were only moderately effective in the views of many teachers. Preservice preparation programs appear to be more effective in developing knowledge and understandings than in developing teaching skills. For example, programs were rated as more effective on teaching about how children develop and learn than they were on teaching how to diagnose student learning difficulties.

Variations in ratings of effectiveness reflected differences in preservice preparation programs pursued by teachers and in their current teaching situations. In general, teachers with an elementary background rated their programs as marginally more effective on pedagogical aspects than did teachers with a secondary teaching orientation.

Although there were relatively few differences across experience categories, teachers who were in their first year of teaching tended to rate certain aspects of the program more favorably than did those who were in their third or fifth year of teaching. Among the items on which first-year teachers were more positive about their preparation were the following: assessing social-emotional needs of students, evaluating students, understanding the organization of the educational system, understanding legal aspects of education, knowing the ethical standards of the teaching profession, developing a personal philosophy, and making a commitment to continuing professional growth.

The reasons for the differences between teachers in their first year and those in their third- or fifth-year are difficult to identify. However, comments made by third- and fifth-year teachers about certain aspects of their programs suggested that at least some of the differences may be due to recent changes in preservice programs.

Program Potential, Effectiveness, and Importance of Knowledge and Skills

An indication of the general relationship among program effectiveness, program potential, and importance of items can be inferred from Table 5. The table shows the items on which the mean response scores on effectiveness ranked from first to 15th. In the second and third columns are displayed the rankings of the mean response scores of the same items on program potential and importance to teachers. A comparison of the rankings of the same item across the three columns indicates how the effectiveness of preservice programs relates to judged potential and importance of particular knowledge, skills, and understandings.

TABLE 4
Distribution of Responses on Knowledge, Skills and Understandings on which Programs Rate Relatively High or Relatively Low in Effectiveness (N=515)

Knowledge/Skill/Understanding	Effectiveness		
	High	Moderate	Low
<i>High Effectiveness</i>			
Knowing how children develop and learn	66.8%	25.2%	8.1%
Knowing the ethical standards of the teaching profession	52.8	32.3	14.9
Having a broad general education	53.6	32.6	13.8
Using a variety of methods of instruction	51.8	34.6	13.6
Understanding one or more subject areas in depth	51.9	27.6	20.5
<i>Low Effectiveness</i>			
Assessing the social and emotional needs of students	14.7	32.8	52.5
Participating in the process of improving schools	9.1	31.3	59.6
Relating effectively to other teachers	12.1	29.5	58.4
Communicating effectively with parents	11.6	20.2	68.2

TABLE 5
Ranking of 15 Knowledge, Skill and Understanding Items on Program Effectiveness, Potential of Preservice Programs, and Importance to Teachers

Knowledge/Skill/Understanding	Ranking		
	Effectiveness	Program Potential	Importance
Knowing how children learn	1	4	22
Knowing ethical standards	2	2	25
Having a general education	3	3	21
Using a variety of methods	4	8	12
Understanding subject areas	5	1	23
Having command of language	6	6	7
Understanding legal aspects	7	5	28
Understanding organization	8	7	30
Having personal philosophy	9	17	17
Planning daily and long-term	10	11	8
Selecting materials	11	12	11
Making growth commitment	12	21	18
Motivating students	13	14	2
Understanding social issues	14	10	27
Making classroom stimulating	15	19	9

The pattern which emerges from these comparisons suggests that preservice preparation programs tend to be judged most effective in areas of knowledge, skills, and understandings in which teachers expect them to make a substantial contribution. Included among these are knowing how children develop, knowing the ethical standards of the profession, having a broad general education, understanding subject matter, and understanding legal aspects of teaching. With few exceptions, the areas in which preparation programs are most effective tend to be of only moderate importance to teachers in their daily work. Among the exceptions are using a variety of methods, having an effective command of the language of instruction, and planning on a daily or long-term basis.

In contrast, preparation programs are only moderately effective or low in effectiveness in a number of areas which are highly important to teachers. Generally, these tend to be skills that they require in the day-to-day conduct of their classrooms such as organizing for teaching. For this item, the mean response score ranked 17th on effectiveness and 16th on potential but first on importance. Programs were also rated low in effectiveness in helping teachers learn how to communicate with, motivate, and evaluate students. Teachers attributed relatively low potential for preservice programs to help them develop these skills.

Contributions of Components

In Part C of the questionnaire, teachers rated the significance of the contribution made by seven components of the preservice program to the development of knowledge, skills, and understandings which are important to their work. Space was also provided for comments. The distributions of the responses across the scale are presented in Table 6. Although there are some clear trends, every component was rated as either high or low in significance by some teachers.

Practicum experiences were rated as the most important component of preservice preparation programs by a substantial margin over any other component. Approximately two-thirds of the respondents gave it the highest possible rating. Comments indicated that practicum experiences were rated positively because they are practical, provide direct contact with teaching, are clearly relevant to the work for which teachers are preparing themselves, and initiate the process through which teachers become socialized to the profession of teaching.

Noneducation courses and general interest courses were rated more favorably as components of preservice preparation than were courses offered in the Faculty of Education. These courses were viewed positively because they provide a general background for teaching and knowledge of the area of subject specialization. Of the education course component, curriculum and instruction and educational psychology courses were rated as being more significant to teacher preparation than were educational administration and educational foundations courses.

Curriculum and instruction courses are expected to provide experiences which are related directly to instructional tasks in the classroom. Teachers who experienced courses which they viewed as practical rated them more favorably than did those who regarded them as theoretical or idealistic. Those courses in which professors used instructional methods which were being advocated were rated more favorably than were those in which there was a discrepancy between "theory" and actual practice.

Educational psychology courses were viewed favorably because they contribute to developing understandings of students and of learning styles. Favorable assessments

TABLE 6
Distribution of Responses on Significance Ratings
of Components of Preservice Preparation (N=515)

Component	Significance Rating					
	7	6	5	4	3	2 & 1
Practicum experiences	67.0%	17.6%	7.3%	4.6%	2.5%	1.0%
Noneducation courses	24.0	20.8	19.0	11.5	8.8	15.8
General interest courses	13.7	21.9	28.0	19.1	9.1	8.2
Curriculum and instruction	14.5	20.4	24.1	20.0	9.8	11.2
Educational psychology	17.7	19.1	22.2	17.7	10.6	12.7
Educational administration	6.5	13.3	18.2	27.2	16.2	18.6
Educational foundations	2.7	5.2	8.8	16.5	20.7	46.1

increased when application to the classroom context was demonstrated by the instructor.

The majority of respondents did not see the relevance of educational foundations courses for preparation as a teacher. Relatively infrequent favorable assessments were related to the contribution which courses make to general knowledge and to personal development. A substantial proportion of respondents regarded educational administration courses as relevant and practical; however, overall assessments were reduced for a variety of reasons related primarily to the content of the courses.

Strengths, Weaknesses, and Improvements

The strengths and weaknesses of preservice preparation programs were addressed both through open-ended questions in the questionnaire and through the interviews. Consistent with the responses indicated above, the major strengths of preservice preparation programs identified by teachers were related to practicum experiences; curriculum and instruction courses followed in second place. There was considerable diversity in views of teachers about other strengths of the programs.

Practicums were described as a strength because prospective teachers appreciated the opportunity to have “hands on” experiences, to acquire a store of ideas about teaching, and to develop confidence in themselves as teachers. In the views of teachers, practicums could be improved through better selection and preparation of cooperating teachers, better monitoring of the practicum placements, and greater involvement of faculty consultants or associates in the practicum. The major suggestion offered by teachers for improving preservice preparation was to provide more practicum experiences and to begin them earlier.

Curriculum and instruction courses were identified as a strength because prospective teachers learned those things which they could apply in the practicums and later in their own classrooms. Suggestions for improvement tended to focus on an even greater applied orientation in the content as well as on a closer integration of theory and practice.

Those students who experienced good instruction regarded the quality of their professors as a strength of the program. Good instructors are those who know how to teach and know what teaching in the schools is like. They are able to help students prepare themselves for teaching by serving as role models and by exemplifying sound instructional practices. On the other hand, professors who are “out of touch with the

reality of the schools" were perceived to be a weakness in the program.

In general, the major shortcomings of preparation programs are the heavy emphasis on what teachers described as theory and the limited opportunities which are provided for developing the skills required in teaching. Teachers reported that when they began to teach they encountered numerous problems or unknowns. The substance of university preparation seemed to be far removed from the realities of classroom teaching, according to numerous participants in the study. Teachers would improve programs by injecting more of a "how to do" emphasis into preservice preparation.

Shortcomings were also perceived in the general organization of the program: courses were not sequenced appropriately, practicum experiences were not placed at the optimum point, assignments were time consuming and trivial, integration of content within and across components was lacking, and some mandatory courses were of questionable value. To a number of teachers, the logic behind the structure was not evident; completing a teacher education program was little more than taking a required number of discrete courses.

Some teachers proposed higher standards for admission and greater selectivity of candidates for teaching as a way to improve programs. A few proposed a major program redesign; however, there was no evident consensus on what major changes should be introduced. The majority of teachers were supportive of addressing specific areas in which they saw possibilities for improvement.

Discussion

The similarities between the results of this study and of previous research serve to remind teacher educators of numerous long-standing issues and problems which must be addressed in the search for improved teacher preparation. Among these challenges are clarifying the philosophies on which preservice programs should be based, deciding on the extent to which teacher preparation should be oriented toward practice, achieving the integration of theory and practice, improving the nature and quality of teaching in preservice programs, and placing reforms in the changing contexts of teacher education. Relating the specific outcomes of the study to summaries of issues (Hrynyk, 1987) or of research (Wideen & Holborn, 1986) would be productive but is beyond the scope of this report. Instead, this discussion will focus specifically on the central question: To what extent do preservice preparation programs provide teachers with the knowledge and skills which are important for effective teaching?

From the perspectives of teachers, preservice programs make only a limited contribution to the development of skills which are essential for effective performance in classrooms. Although preparation programs contribute to the development of a broad range of knowledge and skills, the greatest contributions are in areas that do not relate directly to what teachers consider to be of their greatest significance to them in their work. Teachers appear to expect to learn most of these skills through experience; on the other hand, they do expect to acquire knowledge of subject matter and of various aspects of teaching through preservice preparation. In general, the latter expectation is fulfilled to a higher degree than is the expectation to learn about practical aspects of teaching.

The results are consistent with those of other studies which suggest that teachers feel inadequately prepared to face the classroom on the basis of their preservice preparation (Wideen & Holborn, 1986). On the other hand, teachers do not seem to be intensely negative about their preparation because most of them probably entered preservice programs with relatively modest expectations. Nevertheless, in the views of teachers, preservice programs could do much more to help prepare them in areas that are important to effective teaching.

The extent to which preservice programs should and can be made more practical is a significant issue for teacher educators. One position holds that preservice programs should provide the broad knowledge base on which effective practice can be built without becoming immersed in technical matters (Clifton, 1985; Miller & Taylor, 1984). Others, particularly students (Nixon & Bumbarger, 1984), might hold that the need for developing teaching skills or pedagogical insights (Bruneau, 1985) cannot be ignored. Still others (O'Neill, 1986) raise the question as to whether universities offer teacher training or teacher education programs. Regardless of the emphasis, there is need for teacher educators to be concerned about the integration of theory and practice as well as about the transition from student to teacher roles (Horowitz, 1984; Tardif, 1985; Turner, 1985).

In the short term, immediate attention might be directed to making explicit the rationales and philosophies on which teacher preparation programs are based. The results of the study indicate that prospective teachers bring different orientations and expectations to preservice teacher preparation programs. Their comments suggest that they experience programs differently and they evaluate them in different ways. Virtually every aspect of teacher preparation programs is viewed positively by some teachers and negatively by others. The sources and degrees of satisfaction vary widely from person to person.

To some extent, the variation may stem from a lack of understanding of the goals and purposes of teacher preparation. Simply making goals and philosophies explicit will not solve the problem; however, explicit rationales may reduce the discrepancy between expectations and experiences. Prospective teachers may learn more from their preservice programs if they are clear on what they should and should not expect to learn. How these philosophies can best be communicated to prospective teachers is a challenge in itself.

Conclusion

Although many of the findings of the study will not be new to teacher educators, the lack of novelty should not be the basis for disregarding the views which teachers have about their preparation programs. Indeed, to have particular strengths identified again could serve as reason for accentuating or emphasizing certain desirable practices in preservice preparation. Shortcomings on which there is a measure of consensus as well as suggestions for ways in which preparation programs might be improved could serve as a point of departure for considering program change. At the same time, there is reason to be cautious about relying too heavily on retrospective assessments by teachers of their experiences as a basis for reform in teacher education. Other factors must also be considered.

A recommendation for more research is a predictable conclusion to any such report. The need for more diversity in research on teacher education has been emphasized by Wideen and Holborn (1986). To the suggestion of adopting a broadened perspective on studies of teacher education could be added that of initiating more systematic forms of action research or what Stones (1985) refers to as investigative pedagogy. Many of the most perplexing issues in teacher education might best be addressed by combining research with efforts to improve practice. Action-oriented research could begin with making purposes and goals explicit, designing specific components of programs to achieve intentions and exploring the consequences. Perhaps the most productive strategy is not to attempt to develop a generalizable body of theory and research in teacher education but to use appropriate modes of inquiry to address long-standing and persistent problems in particular teacher education programs.

Notes

1. The project was initiated by the Cooperative Committee on Research in Teacher Education (CCRTE) of The Alberta Teachers' Association. Financial support was provided by the Alberta Department of Education; the Faculties of Education at the University of Alberta, the University of Calgary, and the University of Lethbridge; and The Alberta Teachers' Association. Members of the Cooperative Committee on Evaluating Teacher Education Programs (CETEP)—Rod Conklin, Myrna Greene and Erwin Miklos—served as the Project Team while the CCRTE performed the functions of a steering committee from the proposal to the final report stage of the study.
2. Results of the study are presented in four reports which are available from The Alberta Teachers' Association, Barnett House, 11010-142 Street, Edmonton, T5N 2R1 at the prices indicated: Chapman, (1986)—\$5.00; Hawryluk, (1986)—\$4.50; Hawryluk & Greene, (1986)—\$4.00; and Miklos, Greene, & Conklin, (1987)—\$7.50. The price for the set of four reports is \$16.00.
A monograph (Greene & Miklos, 1987) entitled, *Preparation Programs in Alberta Universities: Teachers' Evaluation*, which summarizes the study may also be obtained from The Alberta Teachers' Association at \$4.00 per copy. The substance of this paper is based on the monograph.
3. Copies of the questionnaire are included in the summary report (Miklos, Greene, & Conklin, 1987) and in the monograph (Greene & Miklos, 1987).

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PERSPECTIVES

The Pervasive, Persuasive Power of Perceptions

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Through their influence on attitudes and behavior, perceptions are central to both practice and research in education. This article examines some leading developments in perception theory and research, particularly in respect of (a) the influence of perceptions on behavior, (b) the accuracy of perceptions, (c) the capacity of individuals to express perceptions, (d) perception processes, and (e) major factors influencing perceptions of persons and social events. This discussion leads to the presentation of seven generalizations about perception and a consideration of their implications for all who engage in educational endeavors. Most importantly, it serves as a basis for examining means to limit the potentially prejudicial impact of perceptions on educational research.

Perceptions shape human attitudes and behavior; their impact is pervasive and unavoidable. They provide bases for understanding reality—objects, events, and the people with whom we interact—and our responses to them. Thus perceptions dominate all the situations that educational and other social researchers study. Perceptions also focus the work of the researchers themselves—the behaviors researchers notice and choose to record, the opinions they invite from others, and the theoretical perspectives within which they interpret data and frame conclusions.

An initial intent of this article is to draw attention to extant knowledge about the nature of perception and the factors that affect the perceptions of individuals in educational organizations. This provides a basis for advancing a framework of factors associated with perception and for considering important implications of perception theory for educational researchers and practitioners. Researchers, in particular, need to be conscious of the pitfalls inherent in relying on their own and others' perceptions.

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The ideas presented were drawn from the literature, from the author's discussions with researchers and educators, and from personal experience.

The Pervasive Influence of Perceptions on Educational Practice and Research

Practitioners in educational settings deal with perceptions constantly. They are first employed and then evaluated substantially in accordance with perceptual impressions. Instructional practices, administrative decisions, and policy initiatives are guided by perceptions of individuals and educational needs, as are responses to the actions of coworkers and others. Knowledge of employees' and other stakeholders' perceptions helps administrators to revise educational policy and change individuals' experiences in educational organizations, and knowledge of perception theory may provide an avenue for directly improving educational leadership and practice.

Educational research also involves scholars in these situations. Seeking knowledge of the interactive behavior, personalities, attitudes, and emotions of practitioners, researchers enter university and school classrooms, the offices of administrators, and a variety of other locations to elicit perceptions from policy makers, administrators, instructors, and students. For those investigators who desire no more than understanding of attitudes and feelings, perceptions are paramount. And, because behavior occurs in response to perceptions, perceptual data also hold a key to researchers' knowledge of organizational behavior. Some scholars use questionnaires and interviews to gather perceptual data for quantitative analysis. Naturalistic researchers and policy analysts also rely on perceptions stated by others, and they document their own perceptions of organizational events and environments. Researchers using interpretive orientations value perceptions as indicators of the realities for individual educators. Conceding that an objective reality can be known only through the filter of perceptions, researchers of a rationalistic bent also depend on perceptions—as surrogate measures of reality. Doubting the trustworthiness of their data, some scholars explore perceptions still further, using a variety of sources, strategies, and investigators to corroborate their research findings as true and full representations of life in educational settings.

If educational research is to make important contributions to knowledge, researchers need to become conversant with the nature and processes of perception and with the factors that shape and can bias the perceptions of those engaged in research and practice. This will allow them to address personally and methodologically the trustworthiness of their scholarly endeavors.

The Nature of Perception

A Problem with Definition

To date, the notion of perception has resisted clear and conclusive definition. Once regarded simply as "sensation plus meaning" (Bartley, 1980, p. 5), most psychologists now view sensation as a physiological experience and perception as a cognitive activity (Krech, Crutchfield, Livson, Wilson, & Parducci, 1982). Perception and other cognitive activities such as "inferring, categorizing or judging" (Tajfel, 1969, p. 316). Despite this conceptual uncertainty, there is broad consensus that perception is "the understanding of the world that you construct from data obtained through your senses" (Shaver, 1981, p. 83). As Shaver noted, such a definition implies that perceptions are obtained through sensory experiences rather than merely by reflection or intuition, that an objective world exists outside the perceiver, and that the perceiver actively forms an impression from each stimulus.

Developments in Theory

Investigation of physiological sensory processes (e.g., Bartley, 1972; Hochberg, 1978) has been unable to account fully for perceptual experiences, so many psychologists have paid closer attention to the complementary psychological dimension. To this end, structuralists tried to expose and describe the characteristics of and relationships between aspects of conscious experience (Dember & Warm, 1979). Gestalt theorists criticized those attempts to decompose total perceptual structures and focused instead on how individuals perceive situations as a whole (Moates & Schumacher, 1980). Allport (1955, pp. 576-612) extracted from 13 “specialized, divergent, and often discordant” theories of his time eight major generalizations (most of which survive in current theories): (a) individuals aggregate and interrelate multiple understandings of events; (b) these “perceptual aggregates” are organized within limiting conceptual boundaries; (c) perceptions are assembled over time; (d) although general order and stability prevail, some perceptual inconsistencies are tolerated; (e) perceptions remain relatively constant over time; (f) there is a tendency to return to original “steady state” perceptions following the disruption of new impressions; (g) impressions are weighed unequally in perceptual aggregation; and (h) although perceptual aggregates sometimes conflict, usually they mutually support higher-order perceptual generalizations. Kelly’s (1955) “role-construct theory” emphasized interrelationships among the individual’s perceptions, interpretations, and behaviors: By developing “constructs,” or categories of events, the perceiver forms expectations and plans behavioral responses; and comparison of new perceptions with existing systems of constructs validates current understandings and classifications of people, objects, and events. Likening perceptual processes with computer system procedures, however, “information-processing” theorists contended that perception occurs only after sequential transformation stages: stimulus, sensory store, perceptual image, memory, and response. Moates and Schumacher (1980, p. 276) noted that, whereas Gestalt psychologists “had a remarkable flair for capturing the intuitive aspects,” information-processing theory helped to “formalize the sometimes vague gestalt ideas so that they are more testable.” The study of “social perception,” as yet still “in its infancy,” focuses specifically on three important avenues of research: (a) study of the effects of social interaction on perceptions of physical properties; (b) investigation of perceptions of individuals’ physical and social characteristics; and (c) exploration of perceptions of social relationships and events (Hochberg, 1978). The latter, of primary interest to educational researchers, includes the emerging fields of attribution theory and implicit personality theory.

The Perception Process

Perceptions seem to be formed in a series of cognitive steps. A common view is that a perceiver selects and categorizes sense data within predetermined structures, or frames of reference; in turn, these are subject to attributes of personality (Kelly, 1980).¹ According to Bruner’s (1951) “expectancy or hypothesis theory of perception,” three stages are involved: the individual hypothesizes about the occurrence of a likely event (“hypothesis”), the environment provides an informational stimulus (“information”), and this prompts a confirmatory response from the individual (“confirmation”) (pp. 121-127). Moates and Schumacher (1980, pp. 16-17) advanced a more detailed explanation: sensory receptors are oriented toward a source of stimulation; certain features and contextual factors are extracted (noticed); and then the perceiver engages in “a cyclic process of orientation, feature extraction, comparison with memory, and then additional orientation, feature extraction, and comparison,” permitting

the perception to be incrementally refined. This “chain of perception” process (Krech et al., 1982, p. 103) accords with Litterer’s (1973, p. 108) “selection-closure-interpretation” explanation and Forgus and Melamed’s (1976) description of a sensation-perception cycle.

Four questions about this perception process are of central concern to educators and researchers: (a) To what extent do perceptions affect behavior in educational and other social settings? (b) Are members of educational organizations able to consciously identify and express their perceptions? (c) How accurately do perceptions portray reality? and (d) Are perceptions shaped by identifiable and commonly occurring factors?

Perceptions and Behavior

Through a process of “discovering what the environment is really like and adapting to it” (Neisser, 1976, p. 9), perceptions shape the social behavior of individuals. Perceptions allow individuals to understand, anticipate, and react to environmental circumstances, events, and the behavior of others (Forgus & Melamed, 1976; French, Kast, & Rosenzweig, 1985; Harvey, Weary, & Stanley, 1985; Wrightsman, 1977). Blake and Ramsey (1951), Litterer (1973), and Kelly (1980) also highlighted perceptions as the critical determinants of behavior in organizational settings and, although Tagiuri (1969, p. 435) warned that other factors also impose on social behavior, he concluded that, “if there is to be a science of interpersonal behavior, it will be based, to some extent, on our learning more about how people come to perceive other people as they do.” Hochberg (1978, p. 242) also regarded the study of perception as “an important tool for understanding and predicting behavior” in social situations, and Shapiro and McPherson (1987, p. 75) recently focused attention on public policy makers’ perceptions of policy dilemmas as “an important determinant” of their “policy behavior.”

Understanding of perception is therefore critical for educational research and practice, for social behavior in educational settings is guided not merely by an assumed objective reality but by actors’ individual perceptions and by the factors that shape and distort those perceptions.

Capacity to Express Perceptions

Though instrumental in determining behavior, many perceptions are beyond the capacity of individuals to consciously recognize and verbally express. Cameron and Whetten (1983, pp. 12-13), for example, concluded from organizational effectiveness research that

There appears to be ample empirical evidence . . . to suggest that individuals frequently cannot report accurately the criteria of organizational effectiveness that they implicitly hold. Nor are they aware of the factors that motivate their judgments or evaluations of an organization. When researchers ask various constituency members to specify important criteria of effectiveness, there is no assurance that the criteria they enumerate will be consistent with the criteria they use implicitly to judge effectiveness.

Cameron and Whetten supported this view by citing research that asked organization members to rank “47 different goals in their institutions”; none received particular priority. Clearly, these authors’ assessment was based on an especially onerous demand on the recall and cognitive organizational capacities of respondents. Nevertheless, it does signal a potential danger in seeking perceptual measures of individuals’ impressions about abstract organizational attributes.

How Accurate are Perceptions?

On the matter of perceptual accuracy, Rock's (1975, p. 5) research findings are encouraging: "granting that the perceived world is different from the world that is the object of perception, one can still say that there is a high degree of correspondence." If so, we may treat perceptions as broadly accurate indications of the "real worlds" of educational organizations. On the other hand, the literature also includes numerous references to "illusions" attesting to a clear discrepancy between reality and perceptions of objects. Of course, the accuracy of perception of social events is more difficult to measure, for phenomena that defy direct inspection and measurement can be known and understood only through a process of perceiving; if individuals' perceptions of an event agree, we can only assume that they reflect reality (Rock, 1975; Shaver, 1975). Even so, Gladstein's (1984) research and a range of studies reviewed by Wrightsman (1977) disclosed a pervasive human incapacity for perceiving and recalling either objective or social events with accuracy—a finding that supports Allport's (1961) generalization that "good judges" are rare and Blake, Ramsey, and Moran's (1951, p. 5) conclusion that "sometimes . . . it is not difficult to show that the margin of interpretative error is very wide." Clement (1978) blamed selective perception for this apparent disparity—selections that, of course, differ among individuals. Availability of information is an associated problem: possessing only fragmentary information, individuals are frequently obliged to make perceptual assumptions and hold personal expectations which lead them to perceptions that diverge from reality and from those of other witnesses (Hochberg, 1978; Litterer, 1973). Hochberg (1978) further identified three common causes of perception-reality discrepancy: (a) events that cannot be discerned; (b) omissions, additions, and distortions arising out of human perceptual processes; and (c) events whose significance is misunderstood. Differing histories of perceptual learning, attention, and intentions also lead individuals to form different impressions of events and persons.

As much of the research and our personal experience tell us, individuals' perceptions of social events frequently differ. For example, we may expect an instructor, an inquiry-oriented student, and a student motivated only by threat of examination to perceive the purpose, product, and quality of a shared seminar experience quite differently. Hence educational practitioners and researchers would do well to draw on a variety of perspectives and to recognize the limitations of their own and others' perceptions when forming impressions and making decisions. For many researchers, in particular, reliance on multiple data sources may increase the convergence of perceptions and thus the likelihood of discovering a shared or objective reality.

Despite inaccuracy, there is often considerable consistency in social perceptions as well as in the biases that cause individuals' perceptions to depart from reality and the impressions of others. Perception research has disclosed a range of central influences—summarized in Figure 1 and discussed below—that can help us to understand and account for the effects of perceptions on educational research and practice.

Factors that Affect Perceptions

Perceivers arrive at their limited, differing, sometimes distorted impressions of persons, objects, and events only after influence from a range of complex and subtle factors. Despite an initially bewildering array of influential factors, certain "perceptual determinants" emerge as common among perceivers (Blake et al., 1951, p. 8). Scholars have classified them in a variety of ways, such as familiarity, strength, and salience of stimuli (Kelly, 1980) and "experience, intelligence, and empathic ability" of perceivers (Shaver, 1975, p. 22). Most comprehensive are Forgas and Melamed's (1976) four

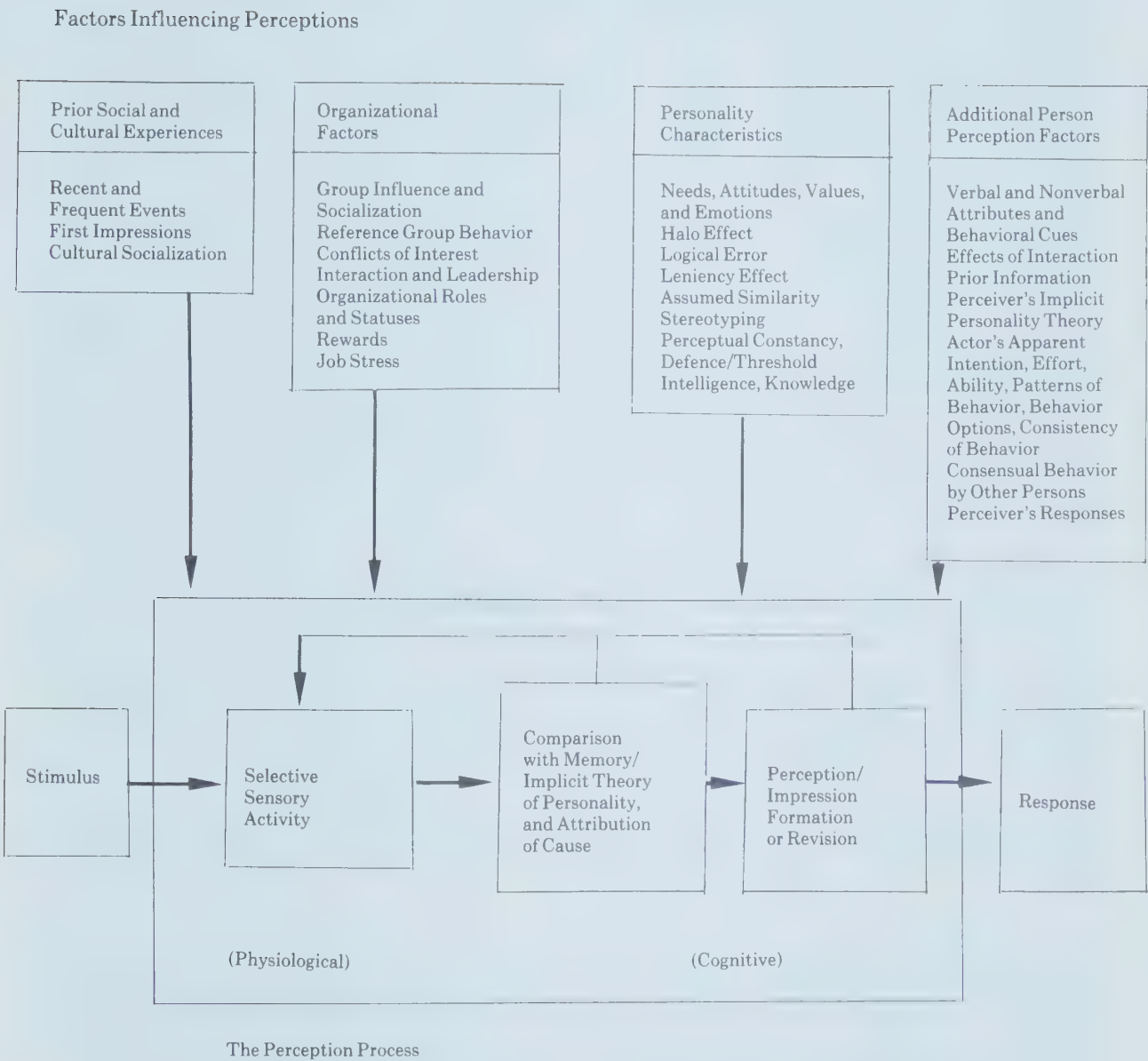


Figure 1: The Perception Process and Influential Factors

categories: (a) influences of social experience and cultural background; (b) impact of the perceiver's values, attitudes, and personality; (c) dynamics of person perception; and (d) perceptions of causality in social events.

Social and Cultural Experience

Social/organizational experience and cultural heritage are widely accepted as important determinants of perceptions. Clement (1978, p. 51), for example, argued that individuals process and categorize environmental occurrences according to existing "perceptual structures"—structures based on prior experience that are expanded and altered by the new perceptions. To Wrightsman (1977, p. 95), these perceptions develop as if "peeling an onion." Though the weighting of new and existing pieces of information is unclear, first impressions and recent and frequent events seem to impose heavily on subsequent impressions—except where perceivers consciously resist their prejudicial influence (Epstein & Rock, 1960; Krech et al., 1982; Litterer, 1973). Common work and other experiences also lead individuals to form similar perceptions (Litterer, 1973) and there is evidence that social contact and familiarity with different classes of persons and situations, group norms, personal self-confidence, and linguistic classificatory labels also affect perceptions (Tajfel, 1969).

Furthermore, perceptions of facial and other perceptual cues seem to be culturally influenced; individuals from different cultures sometimes express emotion differently, so their cues are open to misinterpretation (Brunswik, 1944; Tagiuri, 1969). Of course, the discipline of anthropology also has an extensive literature attesting to the pervasive and powerful effect of culture on individual perceptions and on resultant "appropriate" behavior. According to Murphy (1979, pp. 14, 22-23), the "majority view among social anthropologists" favors substantial cultural determination of individual perceptions and actions. By shaping perceptions, culture "tells us how we should act . . . [and] what we can expect of the other person. Behavior is thus rendered predictable, often within broad limits, and we gain a degree of mastery and confidence in social situations." Likewise, Vivello (1978, pp. 16-17) saw culture as a "system of rules or a pattern for behavior—a conceptual pattern that individuals use to explain and justify their experiences or events." Again, Geertz (1979, pp. 43, 46-47) proposed culture as "a set of control mechanisms—plans, recipes, rules, instructions" that impose on individual perspectives and behavior. At the same time, Geertz focused attention on culture's diverse effects on individual perceptions and behavior: "Becoming human is becoming individual, and we become individual under the guidance of cultural patterns."

Organizational Factors

Litterer (1973) highlighted certain characteristics of organizational life that affect members' perceptions. Particularly important is organizational socialization: colleagues, superordinates, and subordinates instruct perceivers about physical, financial, personal, and other signals, thereby educating them about prevailing views of reality and encouraging them to behave accordingly. Individuals—particularly those who lack self-confidence or who value social acceptance—are persuaded to accept, or at least appear to accept, the "group consensus," especially in ambiguous social settings. Perceptions are further affected by the nature of organizational interaction, by authoritative or participative leadership, by expected and actual role behavior and statuses, and by rewards for creativity and achievement; and work stress can prompt unduly early and inaccurate impression formation. The "reference groups" individuals use to judge norms of acceptable behavior and to provide bases for comparison

also influence perceptions and behavioral responses. As French et al. (1985) added, groups frequently distort perceptions about opposing groups with competing interests, leading to mutual mistrust, suspicion, power-consciousness, competitive behavior, and misunderstanding of others' intentions.

Personality Characteristics

Many personality variables have emerged as important influences on individuals' social perceptions; beliefs, needs, emotions, attitudes, values, and expectations of perceivers are frequently cited (French et al., 1985; Kelly, 1980; Krech et al., 1982). Central, however, is Tagiuri's (1969) classification of the personality-related "judgmental errors" (Krech et al., 1982, p. 705) identified by Bruner (1951) and other researchers during the 1950s and 1960s: (a) "halo effect," or a tendency to form global impressions based on overall judgments of goodness or badness (such as where a teacher obtains an initially unfavorable impression of a colleague or student and attributes other undesirable characteristics to that person); (b) "logical error," or assumed coexistence of particular traits (where a pupil assumes, say, that a teacher's energy will be accompanied by aggressiveness); (c) "leniency effect," or a tendency to rate persons high on favorable attributes and low on unfavorable ones; and (d) "assumed similarity," where other persons are assumed to have emotions and traits akin to those of the perceiver. Modern writers on perception commonly add a fifth factor: "stereotyping," that is, "a tendency to assign to people many of the characteristics (real and imagined) of the typical member of the group or class to which they are thought to belong" (Krech et al., 1982, p. 705). For this reason, a professor might be classified as absent-minded or a school principal regarded as an expert teacher merely on account of their status.

Other research has explored the intervening nature of personality through four related factors: "perceptual constancy," "perceptual defence," "recognition threshold," and "preperceptual selection." Individuals' stable and consistent perceptual frameworks are shaped and reinforced through heightened awareness and enhanced valuation of prominent and personally relevant events (Bartley, 1980; Kelly, 1974). To help preserve perceptual "balance," perceivers also "intellectualize" about discordant events, shaping them to fit existing understandings (Heider, 1980, p. 10; Litterer, 1973). Indeed, perceptual defences may cause perceivers not merely to amend interpretations of items but to defensively repress contradictory information from conscious recognition. Paradoxically, selection necessitates prior recognition (preperception); as Hochberg (1978, p. 216) explained, "the self we are aware of . . . sees only what the unconscious observer permits him to see." Less absolute than perceptual defences are recognition "thresholds." Perceivers readily identify important and consistent (low threshold) stimuli; incongruent items can also be recognized, but only after blatant or extended exposure.²

Additional personality factors intrude in the formation of perceptions. "Field-independent" persons retain their preconceived mental sets even in the face of new and conflicting evidence: new events all too easily convince "field-dependent" individuals to amend their perceptions (Hamachek, 1970). High intelligence (Kelly, 1974), "cognitive complexity" and maturity (Bieri et al., 1966; Wrightsman, 1977), inferential ability and knowledge of persons or situations (Gage & Cronbach, 1955), emotional adjustment, interests, and fields of specialization and social interaction (Taft, 1955) also affect judgments of people and social events, as do the personalities of stimulus persons, the nature of the judgmental tasks involved (Tagiuri, 1969) and the judgments and behaviors of relevant social groups (Asch, 1960; Deutsch & Gerard, 1960).

Perceptions of Persons

Perceptions of persons and their relationships and behavior are more complex—and often less accurate—than those of inanimate objects and other social events; for person perceptions embody impressions of “intentions, attitudes, emotions, ideas, abilities, purposes, traits, thoughts, perceptions, memories—events that are *inside* the person and strictly psychological” (Tagiuri, 1969, p. 396). Three aspects of “person perception” are important: (a) perceptions of observable behavior and attributes; (b) assignment of attributions to explain behavior; and (c) use of “implicit personality theories” to form impressions.

Perceptions of Observed Behavior and Attributes

Individuals utilize a range of cues and information sources to understand others’ feelings, intentions, and relationships; extrinsic attributes of perceived individuals and the personality types, traits, prejudices, and stereotypes of perceivers themselves are powerful forces (Hochberg, 1978). Facial and physical characteristics of perceived persons provide particularly strong and consistent—but inaccurate—signals about personalities and emotions (Tagiuri, 1969); facial expressions seem to be interpreted similarly even across cultures (Ekman, Sorenson, & Friesen, 1969; Izard, 1971). Posture and position provide cues about both positive and negative attitudes, and averted gaze and abnormal mannerisms such as hesitation and silence create negative impressions of persons (Mehrabian, 1972). The implications of these findings for perceptions of self-conscious pupils, socially inept administrators, and unconventionally attired instructors are clear. Tagiuri (1969) noted that perceptions of persons are further complicated by the influences of the halo effect, logical error, and other factors referred to earlier, by role relationships, status differences, and other contextual variables, and by the differing perceptual skills needed to gain impressions of individuals, groups, and social events. Through “dyadic interplay,” perceivers’ own actions also affect the behavior, and thus perceptions, of those they seek to appraise:

The perceiver . . . has to allow for the fact that he himself . . . is also the object of perception and thought and that, as such, he influences his own object of perception. Observer and observed are simultaneously observed and observer. Their reciprocal feedback processes modify their self-presentation and, in turn, their reciprocal perceptions, in a continuous recycling but varying process during which each person uses the variations in himself and the other person as a means of validating his hypotheses about the other. (Tagiuri, 1969, p. 426)

This quotation reminds us also of the array of “interaction ritual” and “impression management” strategies that we employ daily to influence the perceptions of others in the university, school, or office (Goffman, 1967; Schlenker, 1980).

To deal with all of this complexity, perceivers stereotype groups of persons and social settings; perceptions of faculty members, say, tend to be affected by impressions of outstanding professors—although observers’ confidence in those judgments diminishes with the discovery of intragroup variation. More generally, four “experiential principles” seem to guide most perceptions of behavior and attributes: (a) initial person perceptions are “gut-level,” generally positive or negative feelings that usually are subsequently confirmed; (b) perceivers initially notice and seek explanations for unusual attributes or behaviors; (c) first impressions focus on observed characteristics and behaviors, although perceivers quickly progress to perceptions based on personality traits; and (d) individuals view other persons in terms of generally “unified, organized collection[s] of traits that usually ‘hang together’” (Krech et al., 1982, pp. 699-700).

Rist's (1970) classic study of teachers' expectations and student achievement graphically illustrates the profound educational impact of perceptual influences such as the halo effect and first impressions. Rist observed that a kindergarten teacher's classification of pupils as "fast learners" and "slow learners" was based on five initial "subjectively interpreted attributes and characteristics" of students—physical appearance, body odor, skin color, forthrightness of behavior, and use of language in classroom interaction. Having classified the pupils according to her social class-based "ideal type" of the successful student, the teacher (and soon also the students) treated the two groups differentially—encouraging one and controlling the other—and their performances diverged accordingly. At succeeding grade levels, use of these performance measures helped to reinforce the self-fulfilling prophecy that had arisen out of those initial perceptions.

Attributing Cause to Explain Behavior

According to proponents of "attribution theory," perceivers not only observe and describe persons and their behaviors, but they often seek greater understanding by attempting to determine causes for behaviors (Shaver, 1975). Attribution theory has attracted attention among social psychologists since the 1970s (Hewstone, 1983): educational researchers continue to ignore this avenue for investigating perceptions and behavior among educational policy makers, administrators, educators, and students (Frasher & Frasher, 1981). "An attribution is an inference about why an event occurred or about a person's dispositions" (Harvey & Weary, 1981, p. 6). Wrightsman's (1977, p. 100) illustration is instructive:

People perceive the behavior of others as being caused and . . . they attribute the cause either to the person, to the environment, or to a combination of the two. For example, Joe failed to call me last night. I conclude that either he forgot (called a personal or dispositional attribution) or his car stalled and he couldn't get to a phone (environmental or situational attribution) or he was mad at me but when he got over being mad the phone at his house was tied up (combination of dispositional and situational attributions).

Apparent accidents, involuntary actions, and unintended outcomes usually require no attributions of cause, and adherence to social norms and conventions also explains many recurring behaviors. Unanticipated and seemingly intentional behaviors, however, call for attribution of a personal trait or external cause; the observer thereby acquires an understanding of the actor and/or situation—one that may create a lasting impression about the other individual's disposition and/or about their social circumstances (Krech et al., 1982; Shaver, 1975, 1981).

Heider (1985) identified five main strategies for determining cause: (a) "Trying"—behavior that reflects exertion and a clear intention is usually regarded as personally caused (e.g., an educator who displays considerable expenditure of energy on a worthwhile project is likely to be judged responsible for its success); (b) "Ability"—actors are held responsible if they seem to have the requisite intellectual, physical, or social ability to produce the outcomes observed (e.g., a seemingly talented professor or teacher might be regarded as the cause of high grades in a class); (c) "Unusual" or "low consensus" behavior—surprising occurrences tend to be blamed on the actors involved; (d) "Distinctiveness"—the more frequently a person acts in a recognized way, the more likely the behavior is to be viewed as a personal characteristic (e.g., if an administrator repeatedly praises all staff members for their achievements, observers may view the commendation as indicative of the administrator's flattering or manipulatory disposition: if the administrator praises staff selectively, then an

external factor—the subordinate(s) singled out for approval—is likely to be held responsible); and (e) “Task difficulty”—a highly complex task, or one that is resisted by the social environment, is more likely to be attributed to the actor (Krech et al., 1982; Shaver, 1981). In addition, a perceiver may consider not only the reasons for an observed behavior but alternative behaviors that the actor elected to forego (Jones & Davis, 1965). Behavior that seems unconventional gives the perceiver “high correspondence”—confidence of knowing what unusual personality characteristic caused it. For example, a principal who sharply criticizes district policies at a meeting of school trustees may be confidently presumed to possess strong personal attitudes about those policies. Finally, the perceiver may search for the source of cause-effect “covariation” (Kelley, 1967)—“the causal candidate which is most closely associated historically with the event being explained” (Antaki, 1982, p. 11). Three personal and environmental elements are taken into account: (a) the observer infers personal attributions from “distinctive,” or uncharacteristic, actions; (b) an explanation is derived by examining the degree of “consistency” or variation in behavior across differing circumstances; and (c) “consensual” behavior by other actors indicates to the observer that environmental factors caused the behavior.

Other factors intervene in the attribution process. Socially undesirable acts prompt strong personal attributions, and unfavorable information about behavior amplifies observers’ interest in identifying causes (Wrightsman, 1977). “Personal motives” make certain kinds of observers especially subject to attributional bias: those who believe “people get what they deserve” consistently blame others for their misfortunes; perceivers who anticipate similar fates usually blame circumstances (Shaver, 1981, p. 138). Trained professionals arrive at distinctive attributions for events within their fields of expertise, probably owing to their exclusive knowledge (Frasher & Frasher, 1981). There are also interactive effects among these factors. If parents or administrators expect high-performing or high-ability teachers to succeed, subsequent high attainment is likely to reinforce opinions about the teachers’ high ability whereas failure may be attributed to their lack of effort.

Our attributions often result in erroneous perceptions. Actors are conscious of environmental constraints and circumstances involved in making behavioral choices: observers, however, usually have to speculate about the actors’ “circumstances, history, motives, and experiences,” so they focus on and over-attribute behaviors to personal factors (Jones & Nisbett, 1971, p. 5)—“the fundamental attribution error” (Ross, 1977, p. 183).

We also engage in *self*-attribution to form impressions about ourselves.³ Knowing our own contextual factors, we tend to “blame the environment” (e.g., unsupportive politicians) for our own behavior: observers blame our personal characteristics (e.g., political naiveté, Jones & Nisbett, 1971, p. 2). Moreover, feeling confident that external circumstances are responsible, we rarely seek confirmation of self-attributions (Olson & Ross, 1985). Further self-attribution bias arises out of our explanations of academic, vocational, and social successes and failures: We tend to blame external circumstances for our own failures but see ourselves as instrumental in successes (Shaver, 1981; Wrightsman, 1977)—an “ego-protective” distortion of attributions (Hewstone, 1983, p. 3). In this regard, Rogers (1982, p. 231) reported an observed tendency for classroom teachers to describe pupils as “odd,” “disturbed,” or “peculiar” when explaining their students’ failures. Self-attributions also affect our behavior: attributions to “stable,” or long-lasting, qualities such as ability or hard work motivate future effort; attributions to transient personal factors, such as luck, mood, or fatigue, do not (Weiner, 1979).

In summary, Krech et al. (1982, p. 715) concluded from their review of research that, where perceivers witness pleasurable or undesirable behavior, are affected by behavior, place great importance on behavior, or observe their own behavior, they “are likely to both see and believe what [they] ‘want’ to, and . . . attribute accordingly.” Furthermore, the greater the involvement of perceivers in behavior, the more likely perception bias—and conflict of perceptions—is to arise and the stronger is its probable effect. Despite current criticism of attribution theorists’ reliance on rationality, predictable bias, and human desire to investigate and process social interaction information (Hewstone, 1983; Lalljee & Abelson, 1983), attributional principles have substantial relevance for educational settings: They signal a need for open communication within faculties, staffrooms, and classrooms and help in understanding educators’ and stakeholders’ explanations for organizational and personal successes, failures, and behavior. And as Frasher and Frasher’s (1981) novel framework indicates, attribution theory also holds important insights for educational researchers.

Implicit Personality Theories

Although observations and attributions help in the development of perceptions, the perceiver finally relies on a “set of expectations about which personality traits will be mutually associated” to form organized impressions about others (Shaver, 1981, p. 139). Two principles of perception are involved: (a) despite the incompleteness of available and observed data, the perceiver develops consistent perceptions (“forms impressions”) of other persons by identifying and stressing certain perceived attributes and inventing others to complete the picture; and (b) the major determinant of impressions of persons is not external stimuli but each perceiver’s personal, unstated (“implicit”) theory about the traits associated with different personality types (Krech et al., 1982). The perceiver categorizes other persons primarily according to physical characteristics, temperament, intelligence, and socioeconomic standing; other attributes that are assumed to follow are conferred accordingly. The perceiver also classifies each attribute on the dimensions of goodness-badness, strength-weakness, and activity-passivity (Osgood, Suci, & Tannenbaum, 1957). Consequently, on the basis of observed behavior, the perceiver can both form a unified impression about the actor and rate that person on each of the three dimensions.

In a study of sales teams in the communications industry, Gladstein (1984) found implicit theories of leadership traits to be important in the formation of impressions among team members. Furthermore, Gladstein’s “most striking finding” was that these theories had led individuals to erroneous perceptions of coworkers’ personalities and, hence, to unfounded explanations of their successes or failures. Similarly, in an educational context, a junior postsecondary instructor might confer on a colleague of high status the traits of coldness and insincerity. The worker may believe that these traits are not only consistent with high status but indicative of, say, relative badness, extreme strength of personality, and high activity. Despite the instructor’s scant knowledge of that colleague, an impression is formed—one that is likely to be not only partially unfounded but subject to observational error based on first impressions, attribution biases, and so on. In this way, implicit personality theory highlights the important role of educators’ predetermined beliefs about personality in the formation of impressions of persons, as well as the constructed unity of those impressions.

Implications for Education

Research on perception highlights the powerful, unavoidable impact of personal perspectives on all activities—including educational practice and scholarly endeavor. The following seven generalizations highlight for educators, administrators, researchers, and readers of research reports central aspects of that impact.

1. The perception process comprises a number of stages: stimulus, sensation, comparison with an implicit theory of personality and existing perceptual knowledge, attribution of cause for personal behavior, and impression formation/amendment.
2. Perceptions, rather than objective reality, at least partially shape individual attitudes and behavior.
3. Perceptions are frequently no more than approximations of reality.
4. Individuals are incapable of recognizing and verbalizing some perceptions.
5. Perceptions tend to develop as internally consistent and temporally stable structures.
6. Perceptions are affected substantially by an extensive but recurring array of factors arising out of social and cultural experiences, organizational attributes, and personality characteristics.
7. Additional factors, such as first and recent impressions, impose on perceptions of persons.

Implications for Practitioners

Such knowledge of perception may be seen by some policy makers, administrators, or other practitioners as “a tool to predict and control human behavior” (Hochberg, 1978, p. 213). For example, by manipulating organizational structures, social relationships, and events, and by displaying appropriate personality characteristics and communicating suitable information, administrators may attempt to shape the perceptions and resultant behavior of subordinates, sponsors, and other stakeholders. Litterer (1973) and Bosetti (1973) defended this use of “administrative apparatus” to integrate discrepant perceptions and efforts in schools and other organizations. Bosetti also saw a place for administrative intervention to relieve dysfunctional stress and its symptom, rapid perceptual closure.

Alternatively, educators and others may utilize their knowledge of perception theory more personally to improve their perceptual skills and interactive behavior in order to approach their daily tasks and social interaction more fully and more accurately informed. Initially, they need to be aware of the factors that distort impressions of people and bias judgments of events. For example, perception theory informs us that the quality of educational evaluations and decisions about personnel and other matters may be enhanced if perceivers resist perceptual influences such as the halo effect, logical error, and assumed similarity. By admitting and weighing evidence that contradicts existing images of persons or events, overall perceptions can be tested, revised, and refined. The principles of implicit personality theory and attribution theory also highlight the prevalence and sources of differing and inaccurate perceptions; they remind practitioners of the importance of frank, regular, organization-wide communication and of the need to watch for bias in their own and others’ causal explanations of organizational performance, individual action, and conflict. Particular attention should be paid to the reasons they use to justify their own behavior, attitudes, plans, achievements, and failures, and they need to bear in mind their potential as observers for erroneously holding others fully accountable for their behavior. The foregoing generalizations and discussion highlight other important factors for which

professors, teachers, and administrators need to be alert.

Beyond awareness, practitioners can act directly to improve the quality of their perceptions—and, therefore, the appropriateness of their behavior—in educational contexts. First, resisting undue influence from initial and recent impressions, educators can consciously and systematically consider issues, persons, and events from a variety of standpoints. In this regard, Morgan's (1986) advice for sound organizational management can inform educational personnel. Morgan argued that effective professionals possess a capacity to "read social situations," whereby they intentionally

remain open and flexible, suspending immediate judgments whenever possible, until a more comprehensive view of the situation emerges. They are aware of the fact that new insights often arise as one reads a situation from "new angles," and that a wide and varied reading can create a wide and varied range of action possibilities. (p. 12)

Indeed, Morgan's elaboration of disparate metaphorical images for viewing organizations affords a framework of multiple, divergent perspectives that administrators and others may find helpful in their effort to view events and persons in diverse ways.

Second, educators need to test their perceptions against those of colleagues, students, administrators, and stakeholders with whom they associate; this calls for a concerted strategy of frank, nonjudgmental communication in the school, university, or boardroom setting, with regular invitations to others to express support or present contrary perspectives. As an example, Kormey (1986, pp. 3-4) commented that school-level evaluators who "actively solicit the perceptions of those whom they are evaluating" can improve understanding, communication, and the quality of evaluations, and can relieve teachers' work stress and feelings of anxiety about supervision.

Third, practitioners need to make critical thinking a feature of their professional work lives. Even more than other professionals, educators are susceptible to the confining socialization of schooling, teacher education programs, and practicum, internship, and initial teaching experiences (Lanier & Little, 1986; Patterson & Miklos, in press; Tardif, 1985; Warren, 1985) that imprisons fledgling professionals within conventional views of education and teaching and discourages analysis and critical reflection. Strategies for fostering critical reflection in education faculties and schools have been proposed elsewhere (Johnson, 1987). It is sufficient to note here that academics, policy makers, teachers, and administrators must bear individual responsibilities for exposing, discussing with colleagues, and habitually questioning existing educational values and theories and the instructional practices to which they subscribe.

Implications for Researchers

Perceptions also impose on educational inquiry in two critical ways. First, researchers draw heavily on the perceptions of individuals associated with educational organizations to learn about life in those contexts, searching either for proxy measures of an objective reality or for expressions of disparate realities for individuals. In either respect, perceptions have much to reveal about meaning and behavior in educational situations. At the same time, the perceptions gained from selected informants afford only partial views of the reality perceived by participants—perceptions prejudiced by all the prior social and cultural experiences, organizational factors, personality characteristics, and other factors that bias and otherwise shape individuals' expressed attitudes and behaviors in diverse, immeasurable ways.

Second—less obvious, but equally important—is the impact of perceptions on researchers themselves. Researchers' own perceptions shape their theories about life in educational organizations, prompt them to identify and regard certain kinds of activities and ideas as worthy of study, bias their selections among available methodological techniques, and influence the data they collect from educators and other

stakeholders. In the first place, paradigmatic stances direct and limit researchers' foci of inquiry; writers such as Burrell and Morgan (1979), Owens (1982), and (in the current volume of *The Alberta Journal of Educational Research*) Jacknicke and Rowell (1987) have made this abundantly clear. One researcher, for example, may approach the study of a school or higher education setting from the standpoint of a traditional "rationalistic paradigm" or "empirical-analytic inquiry orientation." As Jacknicke and Rowell (1987) explained, "The researcher within this orientation sees a classroom existing as a set of variables, and . . . attempts to explain and predict behaviors in terms of these variables" (p. 65). A second researcher, adhering to an "interpretive" or "naturalistic" orientation, may investigate the same social situation expecting to find socially constructed, multiple realities. This researcher may accept what Owens (1982) labeled the "naturalistic-ecological hypothesis which claims that human behavior is so significantly influenced by the context in which it occurs that regularities in those contexts are often more powerful in shaping behavior than differences among the individuals present" (p. 5); or the researcher may emphasize individuality, believing that "What is true for one person is not for another. In that sense we live in different worlds" (Greenfield, 1982, p. 5). In either case, the second researcher will see realities as multiple and context-bound and will be concerned, as Jacknicke and Rowell (1987) observed, to "make explicit the expectations, attitudes, motives, and common meanings that teachers and students have in specific situations" (p. 67). A third researcher, subscribing to a "psychic prison" (Morgan, 1986), "critical theory" (Bates, 1986), or other "radical humanist" (Burrell & Morgan, 1979) orientation, may be led to explore the social metaphors and assumptions that individuals use to dominate others, express their interests, and otherwise cope in the social setting of concern. Jacknicke and Rowell (1987) noted that, with this guiding orientation, "concerns relating to epistemology, power relationships, root metaphors, politics of schooling, and other factors that interplay to construct that phenomenon we know as education need to be examined and exposed" (p. 68). Clearly, the three researchers' orientations will direct them toward different issues and divergent explanations of circumstances and events. More than this, through their emphases on and enhanced responsiveness to specific dimensions and views of organizational life, their limited foci are attended by a potential for misconstruing actions and expressions of opinion accordingly. Morgan's (1986, p. 197) discussion of the political metaphor stressed this potential for a chosen orientation to bias the perceptions of an observer: "Under the influence of a political mode of understanding everything becomes political. The analysis of interests, conflicts, and power easily gives rise to a Machiavellian interpretation that suggests that everyone is trying to outwit and outmaneuver everyone else."⁴ Again, a radical humanist perspective might lead a researcher to perceive erroneously that an individual's action or statement is fundamentally an expression of domination; conversely, to ignore this perspective may also be to overlook an important explanation for that behavior or expression of opinion.

Also critical for the quality of research is the inescapable influence of every researcher's perceptions on the processes of data collection, analysis and interpretation, and subsequent reporting of results. Initially, research methodologies are frequently dictated not only by extant knowledge and needs for further study in particular areas, but also by the preferences, interests, and self-perceived capacities of individual researchers. For those who pursue quantitative studies, data collection is subject to researchers' prior judgments about aspects of phenomena that are worthy of attention. These judgments influence the design and wording of questionnaire

items and the construction of interview schedules and management of interviews. Thereby, researchers' perceptions limit the range of subsequent responses. Perceptual biases also impose on analyses of those data, including selections among available statistical and other techniques, and on the arrangement and reporting of findings. For policy analysts, perceptions direct the selection of respondents, identification of focal issues, choices among available documentary sources as well as the relative weightings and meanings assigned to various stakeholder's expressions of opinion. Other researchers, trying to minimize the confining influences of existing theoretical knowledge and personal belief, prefer to produce detailed descriptions of events, statements, and other observations in specific contexts and to allow these raw data to direct the development of theoretical frameworks for understanding life in those contexts. Even so, few would deny that the favored research perspectives of these central research "instruments" (the researchers), their selective perceptions and explorations of events, and their heightened awareness of and identification with particular informants and viewpoints all vitally affect data collection as well as subsequent efforts to ascribe meaning and significance and to extract themes from voluminous, often conflicting, data.

What can researchers do to overcome—or at least minimize—the threat of prejudice arising from reliance on their own and others' perceptions? Initially, it should be admitted that perceptions, as powerful, pervasive guides to social behavior, are valuable objects of scholarly attention. Moreover, the first issue—informants' perceptions—is of less concern to researchers who subscribe to a strictly individual conception of reality for every respondent and informant; diverse perceptions are seen as indicative of diverse realities. Even so, these researchers must have regard for the faithfulness of the perceptions obtained. The concern remains central, however, for the majority of educational researchers, each of whom searches either for an objective reality or for a realistic account of a shared reality for inhabitants of a chosen educational setting. The trustworthiness of perceptions acquired by researchers can be actively addressed in two ways. First, researchers are better prepared to deal with perceptual bias and associated difficulties if they are conversant with and watchful for the factors (discussed above) that impose heavily on informants' perceptions and, thus, upon the quality of data acquired. Second, naturalistic researchers in education and scholars in other disciplines have devised useful strategies for enhancing and establishing the trustworthiness of perceptual data; these are worthy of consideration by all who engage in research with informants and respondents. (These strategies are noted in subsequent discussion.)

The constraint caused by factors influencing researchers' own perceptions is more subtle and, hence, more difficult to manage, yet it remains a critical constraint on the quality of all educational research. This potential for perceptions to shape—or, more disturbing, to misshape—outcomes of educational research is clear. Here again researchers bear dual responsibilities—the first involving perceptual *self*-awareness. Researchers need to acquaint themselves with the factors that influence perceptions and should commit themselves to introspection and frank appraisal and disclosure of their own research orientations, methodological biases, and inherent prejudices relating to the persons, organizations, and issues associated with each research effort. Only then may we expect researchers to be equipped to investigate and report accurately on influences that focus and restrict the outcomes they present. These proposals warrant brief elaboration.

First, researchers need to consider the powerful and deleterious influences of first impressions and personal preconceptions and assumptions. As with practitioners,

they need to avoid hasty assessments and instead should view social situations, individuals, and their own research efforts expansively. Second, researchers can enhance the quality of their work by expending effort to reflect critically on, acknowledge, and, as far as possible, accommodate opposing conceptions of reality in their studies. Ideally, the confining and potentially misleading influences of particular research orientations may best be avoided by accommodating multiple perspectives within individual research initiatives. Of course, such effort to furnish readers with a range of viewpoints leads to divergent, at times competing, interpretations, explanations, and conclusions—conclusions that, as Jacknicke and Rowell (1987) observed, may be difficult to reconcile. Moreover, this approach is frequently infeasible, given time and resource constraints. At the very least, then, scholars have an obligation to reflect on and admit the limitations that chosen research orientations impose on their investigations and resultant presentations of findings. Readers of their research reports can thereby be afforded some knowledge of the nature and extent of, and biases inherent in, those contributions to knowledge. Third, each researcher should endeavor to select and employ methodological techniques most suited to the research problems identified. The temptation to accede to personal preference must be strenuously resisted, and so the need for dispassionate review of choices is vital. Fourth, each researcher should consciously and as “objectively” as possible (having regard for the perceptual influences noted earlier) subject to personal review all personal beliefs, prior conceptions, and other known biases that relate to the educational issues under investigation. Subsequently, wherever possible, these matters should be exposed to public scrutiny in final research reports. As Dimen-Schein (1977, pp. 13-14) entreated anthropologists: “We always begin [research] with preconceptions. . . . Such preconceptions organize our perceptions. . . . We must therefore make them explicit, and we must state and explain the reasons for them.” Only in this way can readers judge the trustworthiness of researchers’ investigative decisions and the scholarship of their contributions.

Strategies also exist to deal directly with the potentially prejudicial power of perceptions—of informants *and* researchers—on the trustworthiness of research outcomes. They have been explicated in detail in the literature and need only be mentioned here. Nevertheless, the centrality of perceptions and likelihood of perceptual nonrepresentativeness and bias in educational endeavor highlight their relevance for all research initiatives. Educational writers (e.g., Bogdan & Biklen, 1982; LeCompte & Goetz, 1982; Lincoln & Guba, 1985; Merriam, 1985; Miles & Huberman, 1985; Owens, 1982; Skrtic, 1985), primarily those of a naturalistic bent, have advocated strategies to enhance the truth value, applicability, consistency, and neutrality of research. They include triangulation, member checks, repeated/protracted observations in natural settings, and disciplined introspection (to establish “credibility”/internal validity), purposive sampling and thick descriptions (for the sake of “transferability”/external validity), and auditable disclosure and independent audit both of the research procedures (“dependability”/reliability) and of interpretations by researchers (“conformability”/objectivity). These strategies may serve different ends for different researchers. For example, as Silverman (1985) observed, Denzin’s (1970, p. 472) defence of triangulation as a device for corroborating or “adjudicating between accounts” to minimize bias and promote validity involves a use of this strategy for a positivistic intent. At the same time, by adopting an interpretive orientation, collection of multiple perspectives can provide a range of individual constructions of circumstances and events and draw attention to possible sources of perceptual disparity. In view of the factors that affect individual perceptions in diverse ways, current perception theory lends

support to inclusion of these strategies, where appropriate, in both kinds of research.

Educational researchers also have much to gain from other cautions considered and techniques deployed by field research colleagues in anthropology and sociology. Not only do ethnographers and participant observers draw on a wide range of cross-validating strategies, but they adapt methodological strategies and recheck their developing interpretations as research needs demand (Wolcott, 1982, 1985; Van Maanen, 1979). As Wax (1971, p. 10) remarked, researchers who find themselves constrained by “method, theory, or technique” need to “slip through the bars and try to find out what is really going on”—methodological creativity and versatility are emphasized. Anthropologists are also particularly conscious of the limiting and distorting power of their own culturally created values, beliefs, preconceptions, and understandings of reality, and organizing categories. To acquire emic understandings of inhabitants’ experience, they strive to “place in parentheses” those personal perspectives and “to always doubt the relevance of spontaneous moments of recognition” that may spring from their own prior conceptions or misconceptions (McDonnell, 1979, p. 28). Indeed, prior conceptions are widely recognized as a blinding influence in educational and other familiar settings (Wolcott, 1985)—one that Spindler and Spindler (1982) found could be remedied only with extended time in the setting. As an additional strategy, field researchers’ notes record both direct accounts of informants’ perceptions and behavior and—separately—their own reflections and interpretations (Pelto, 1970; Spradley, 1979), helping to minimize the impact of the researchers’ perceptions on their developing understandings and subsequent thick descriptions. Personal diaries further allow field researchers to document and explore the influence of their own perceptions on the direction and conduct of inquiry throughout the course of their investigations.

Conclusion

The pursuit of an adequate theory of perception is far from complete. Nevertheless, research effort is now being directed toward explanation of individuals’ causal attributions in educational and other settings, and researchers are seeking further understanding of the significance and frequency of influence of various factors that intervene in the perceptual process. There remains a need for extensive study of the nature of perception, important factors, and extent of individual differences in perceptions in educational settings. Exploration of these avenues should provide greater insight than is now available on life in educational organizations. In the meantime, researchers who rely on their own and others’ perceptions for advancing knowledge about aspects of education need to be conscious of the factors that affect those perceptions, and they have an obligation to remind readers that their findings portray reality only as it is viewed by themselves and their chosen informants. At the same time, there is consolation in the knowledge that perceptions, rather than objective reality, direct most attitudes and responses. Hence understanding of social behavior in educational settings may continue to be advanced, provided that researchers recognize and acknowledge their individual research perspectives, personal preconceptions, and preferences, and utilize appropriate research strategies to maintain trustworthiness in their inquiry.

Notes

1. There are two opposing schools of thought on the question of process. Adherents of the traditional, indirect perception approach contend that stimuli become meaningful only through a sequence of cognitive activities. Heil (1983), for example, distinguished sensory activity from the perceptual task of isolating specific features of stimuli and developing inferences or beliefs from these features, and he highlighted the latter as a subsequent, cognitive activity. On the other hand, Gibson's (1979) "ecological view" of "direct perception," defended by Michaels and Carello (1981, p. 157) and others, rejects the "impoverished input" theory and the frames of reference view of perceptual organization. They argue instead that perceivers are "active explorer[s] of the environment" seeking out meaningful information which informs them directly without a need for internal processing by perceivers; individuals admit meaningful stimuli selectively, and these trigger perceptions directly.
2. Limitations of these theoretical concepts should be acknowledged. To Neisser (1976), the selection of stimuli for perceptual processing may be a positive, rather than negative, filtering process; rather than using perceptual defences to discard items, individuals may actively choose desirable events from among those available. Furthermore, while much of the literature affords support for the concepts of constancy and threshold, Forgas and Melamed (1976) advanced rival explanations for the research findings on which these notions were founded, and Hochberg (1978) concluded from conflicting research reports that the concept of threshold in social perception is both arbitrarily defined and empirically tenuous.
3. The self-attributional process is widely thought to operate in the same general way as for other persons, although Farr and Anderson (1983) disagreed with this view.
4. Morgan's (1986) use of the dramatic "psychic prisons" metaphor also reminds us of the power of language tools, vocabulary, and communication skills to shape perceptions.

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BOOK REVIEW

SCHOOLS IN THE WEST—ESSAYS IN CANADIAN EDUCATIONAL HISTORY. By Nancy Sheehan, J. Donald Wilson, and David C. Jones (Eds.). Calgary, AB: Detselig Enterprises, 1986, 323 pp.

The editors of *Schools in the West* chose 14 articles for inclusion in this diverse compendium on education in western Canada from the 1870s to the 1970s. With the exception of Brian Titley's "Indian Industrial Schools in Western Canada" and Nancy Sheehan's "The WCTU and Educational Strategies on the Canadian Prairie" which attempt a prairie perspective, each article focuses on aspects of schooling in a single western province. Most of the contributors are involved in teacher education, especially in the history of Canadian education. The others are either general historians or educational administrators.

The format and intent of the work have much in common with previous Detselig editions, including *Shaping the Schools of the Canadian West* (1979) and *Schooling and Society in Twentieth Century British Columbia* (1980), in which specific and often unrelated studies have been brought together under a general geopolitical theme. The essays in *Schools in the West* are grouped under four categories: (a) Curriculum; (b) Teachers; (c) Ethnicity, Women, Class; (d) Policy-Making and Legislation. In the introduction Donald Wilson takes on the task of explaining why these topics were chosen and why certain articles were selected.

In affirming that the selections are representative of the new agenda of Canadian educational history advanced at the annual meeting of the Canadian Historical Association in 1985, namely a focusing "on the actual nature of the educational process itself," Wilson contends that the articles treat subjects and issues related to this process. It soon becomes apparent, however, that the educational process is not a central focus in the multi-authored collection. Although the essays are generally valuable, the work as a whole lacks the levels of synthesis and interrelatedness that one would hope for. Disparate discussions may well characterize the contents of journals, but they are out of place in works designed for undergraduate use.

In commenting on Harro Van Brummelen's discussion of the British Protestant vision of life held by British Columbia's anglophone leadership, Wilson refers to a theme that pervaded the West; however, this vision is neither identified nor traced by most of the other contributors. A regional synthesis is not possible without an overall structure in which the parts have been fashioned with such a framework in mind. Disparate articles listed under such categories as textbooks and curriculum do not, as Wilson claims, lead to a regional synthesis. In fact the articles for the most part suggest that the region has neither polity nor community. Instead it tends to be depicted as an area largely peopled by those who came to an open space to escape history.

Moreover, the interrelationships between educational process and general historical trends should not be enough for the educational historian. A third dimension that involves relating analogical examinations of past experiences to present

circumstances and future possibilities is an integral element of the educational historian's craft. An example of how this was not done in *Schools in the West* can be found in Lorne Downey's discussion on "The Aid to Independent Schools Movement in British Columbia." Wilson states that the "character of relationships, both bureaucratic and political" is addressed in Downey's chapter. He finds that Downey underlines the value of "detailed description and analysis firmly set in time and place." What Wilson believes to be necessary for good historical work is enunciated when he cites the British historian Harold Silver: "first, a concern with close and detailed description and analysis, firmly set in time and place, and second a preoccupation with continuity and change, with crisis and with transformations" (Silver, 1983, pp. 239-240).

Although Downey gives an outline of events that led to the enactment of legislation that provided support for independent schools, he does not situate his data in any historical context or overarching theme other than to refer to Jean Barman's chapter on "Transfer, Imposition, or Consensus? The Emergence of Educational Structures in Nineteenth Century British Columbia." But Barman's discussion, while it provides a thorough and valuable background, does not explain the sources and the long-lasting character of the resistance to private and religious schooling in British Columbia. Van Brummelen's discussion on "Shifting Perspectives: Early British Columbia Textbooks" is better in this regard, but as his account ends in the mid-1920s, it fails to provide an analysis of the "continuity and change" so clearly required in a work that purports to give a regional synthesis. In like manner, while Downey does comment on a number of contemporary factors that led to the provision of aid to private schools, he does not discuss the implications of this decision on future policy orientations.

Nancy Sheehan's initial essay provides a quick overview of formal schooling in Alberta between 1905 and 1980. After touching on three developments: nationalism, progressive education, and vocational and technical education, Sheehan concludes that the school curriculum has always given priority to matriculation programs. Expanding on Sheehan's comments on the progressive movement, Morris Mott discusses the beginnings of physical education in Manitoba in the early nineteenth century. And while both commentators refer to the imperialist orientations of the curricula, neither is moved to suggest that its remnants might still inspire much of what happens in today's schools.

The section on Teachers begins with John Calam's article on the nature of early normal schools in British Columbia and an assessment of their worth by Harold Putman and George Weir in 1925. Calam argues that Putnam and Weir, as representatives of the "new education," rightfully condemned the mediocrity of normal schooling. His discussion is quite persuasive, but it raises questions concerning the inferior status of teachers generally as well as the failure of the reformers to change teaching conditions. Robert Patterson in his short but informed discussion of teachers in rural Alberta during the depression finds them poorly prepared and generally isolated. John Lyons' essay on the rise of the Saskatchewan Teachers' Federation in the 1930s and early 1940s claims that as teachers adopted militant positions, their goals were more readily achieved. But both Patterson's concluding remarks on modern beginning teachers and Lyons' reference to the educational reforms following the CCF victory in 1944 leave one groping to find the source of their optimism.

Most of the conclusions in the section on Ethnicity, Women, and Class are more promising. Brian Titley's essay on Indian industrial schools reveals the deep-seated racism of Anglo and Franco Canadians. Titley's comments come to full flower in his recent publication on Duncan Campbell Scott, *A Narrow Vision* (1986). That myths

about minorities are hard to put down is further demonstrated by Stella Hryniuk and Neil McDonald in their excellent article on the positive aspects of Ukrainian schooling in pre-World War I Manitoba and by Clinton White in his carefully documented study of German Catholics and schooling in early Saskatchewan. Bill Maciejko provides a good account of attempts by working-class radicals to change Winnipeg's public school system in the era of the General Strike, yet his tendency to see the world solely in terms of bourgeois and working-class cultures shows a certain naiveté and becomes somewhat tiresome. Maciejko's heavy-handedness, however, is a good antidote to Sheehan's article on the Women's Christian Temperance Union which all but ignores that organization's anti-urban, anti-immigrant and anti-Catholic bias.

The final section on Policy Making and Legislation has already been referred to in the comments on Barman's and Downey's articles. One cannot leave Barman's discussion, however, without challenging her statement that an education consensus existed in British Columbia by the late nineteenth century that "was so well-suited . . . that it would endure virtually unaltered for almost a century." It may be that the die for schooling was cast by this time, but that it was "well-suited" is open to question. The reasons for the continuing nature of this consensus are not well defined. That it represented majority opinion is quite possible, but whether the public school system that stemmed from the legislation of 1872 was but one of the available alternatives is not examined.

That British Columbia's educational system in this century has been complacent is manifested in Thomas Fleming's account of the Province's School Inspectors. Who the "Old Boys in the Field" were is not discussed other than that they came from the teaching ranks and that they "were more interested in performing school administration than in theorizing about it." Certainly one of their characteristics was an unwavering loyalty to the system. Fleming quotes one inspector to underline the prevailing attitude: "We were the Department's men, selected by the Department, and responsible to the Department." The inspectors' roles were changed following the Second World War and while they were to give more time to supervision as opposed to inspection, it is far from clear that such a transformation took place. In 1973 when the Department gave large districts the right to hire their own superintendents, some assumed that a transfer of loyalties would occur. Fleming concludes that these changes resulted in the Department's losing "much of its influence in shaping the character of school leadership in the Province." Given the evidence presented, such a conclusion does not seem warranted. Fleming's account, like the other three articles on British Columbia, might well have resulted in a different perspective if each contributor had access to the other manuscripts. If this had occurred an overall synthesis would have been possible.

Leaving aside the diverse nature of the essays, what is noteworthy about many of them is their scholarship and research techniques as well as the insights that have evolved from such informed and careful study. David Jones' article on "Schools and Social Disintegration in the Alberta Dry Belt of the Twenties" manifests all these characteristics. It is also an excellent example of how social and educational history can be brought together. Jones' use of census data, school board minutes, and other primary sources gives a sense of the land seldom found in historical studies. In like manner Patterson's use of oral history techniques provides a background that shapes his narrative and situates his observations in contexts that approximate the time and place under investigation. Such levels of sensitivity and scholarship augur well for the future of the history of education.

As Wilson points out, however, in this age of policy studies there is a danger that educational history will become little more than an addendum to whatever issues are currently in vogue. It is essential, therefore, that educational historians give more attention to the interconnectedness of issues and that they attempt to discuss the whole story. In this regard, *Schools in the West* demonstrates the progress that has been made and the work that has yet to be done.

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